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ABSTRACT

Focusing on the formation of career plans among black and white females, a study was conducted using the theoretical and empirical framework provided by a modified version of the "Wisconsin Model" of status attainment. Data collection was designed to obtain information including parental socioeconomic status, mental ability, academic performance, and significant others' occupational and educational expectations. Information about significant others was collected from a sample of racially-balanced, female high school sophomores and from their significant others. The females were also asked to indicate home-career expectations. Three of the six most salient findings are as follow: significant other variables were observed to be the most accurate predictors of career-choice variables; the home-career expectation of females did not manifest strong effects on educational or occupational expectation; and significant other variables did not affect educational and occupational expectation for females more strongly than for males. (A companion document, CE 016 577, reports and compares the findings for black and white males.) Thirteen hypotheses regarding the effects of sex-role differentiation based on the literature review were analyzed, and implications for research and theory are presented. (Detailed descriptions of the sample, statistical analyses, and instrumentation are appended.) (BM)

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SIGNIFICANT OTHER INFLUENCE AND CAREER DECISIONS:

Volume II. Black and White Female Urban Youth

Evans W. Curry
Texas Technical University

H. Lawrence Hotchkiss
The Ohio State University

J. Steven Picou
Texas A&M University

Shirley A. Scritchfield
Tulane University

John M. Stahura
Purdue University

Jerome Salomone
University of New Orleans

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

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Education and Welfare

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FOREWORD

This report is the second in a two-volume series describing processes by which parents, teachers, counselors, peers, and others influence educational and occupational plans of high school sophomores. The first volume compares these processes for Black and White males. This volume focuses on Black and White females, but also includes comparisons between females and males. This research reflects the continuing commitment of the National Center for Research in Vocational Education for generating new knowledge about career development processes.

We wish to express our appreciation to the high school principals and school board staff members for their cheerful cooperation during the data-gathering phase of this research. Many scholars have contributed to the successful completion of this work. In particular, Archibald D. Haller has offered valuable advice and assistance. Additionally, we wish to thank Luther B. Otto, and Jerome T. Kapes for their scholarly reviews of this report.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

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CHAPTER I

INTRODUCTION TO THE STUDY

Introduction

This volume is the second in a two-volume report of empirical research on the career choices of adolescents (see Curry, et al.,1976). The first volume dealt exclusively with males; whereas, this volume focuses on females. The present work grew out of a recommendation by a National Institute of Education Review Panel that the research with males be replicated for females. Consequently, this volume is part of a larger whole. This fact led to a reporting strategy that minimizes duplication between Volume I and Volume II. For example, the review of literature contained in this document centers attention on the career choices of women and does not repeat the more general discussions contained in Volume I (Curry, et al., 1976) and in another volume associated with the project authored by Picou, Curry, and Hotchkiss (1976). In addition, the reader is frequently referred to Volume I for complete discussions of methodology.

The remainder of this chapter is divided into three subsections: (1) The first subsection summarizes the baseline model guiding the research. (2) Subsection two presents a brief summary of the data, emphasizing the dissimilarities between the samples of males and the samples of females. (3) The final subsection outlines the remainder of the report.

The Baseline Model

This research is based on a specific framework for the study of career choices that is loosely termed the "Wisconsin Model" of status attainment, or, more simply, the status attainment model. The status attainment model grew out of traditional, sociological interest in intergenerational status mobility; consequently, occupational choices are viewed as indications of status expectation and translated into status scores for purposes of data analysis. The focus on the status content of occupations sharply differentiates the status attainment model from the major psychological theories of career choices (see, for examples, Super, 1957; Holland, 1966; or Roe, 1956).

It has been well documented that there is a substantial, positive association between the status of one's parents and the status achieved as an adult (see, for example, Blau, and Duncan, 1967). The main thrust of the status attainment model is to describe the intervening, social-psychological processes that account for this relationship (see Sewell, Haller, and Portes, 1969, for the initial statement of these relationships). It is hypothesized that parental status, in part, determines the "significant others" with whom a youth associates. One's significant others are persons such as parents, teachers, and friends who influence his or her attitudes, beliefs, and behaviors. The career expectations of the significant others for the youth, in turn, affect the career plans that youth make. Finally, youths' career plans shape the career attainments that they eventually achieve as adults. In addition, the model postulates that youths' measured mental ability and academic performance directly affect the career expectations held for them by their significant others and indirectly affect career plans and achievements. (See Sewell, Haller, and Portes, 1969; Sewell and Hauser, 1972; Hout and Morgan, 1975; Nolle, 1973; and Curry, et al., 1976 for discussions of these specifications.)

In the status attainment model, career achievements have been measured ubiquitously by educational achievement and occupational status; less frequently, income has also been used. In parallel, career plans generally have been indicated by educational expectations and occupational status expectation. The significant other variables have been represented by parental and nonparental educational and occupational expectations of youth. The model has been extensively tested, using path analysis, for samples of White males, but has not been thoroughly studied for other subgroups of the population. In general, the data lend support to the model when applied to White males (Sewell, Haller, and Ohlendorf, 1970; Woelfel and Haller, 1972; Kerckhoff and Huff, 1974; Williams, 1972; Alexander and Eckland, 1975; and Picou and Carter, 1976).

A simplified path diagram of the basic hypotheses is shown in Figure 1. Variables at the pointed end of each straight arrow are viewed as partially determined by the variables at the base of the arrow. Variables joined by double-headed, curved arrows are taken as correlated, but no attempt to assess their "casual" relationships is to be undertaken. The variables labeled U_1, U_2, . . . are unmeasured residual variables reflecting the fact that no variable in the system is completely determined by any combination of the other variables in the system. The diagram provides a convenient picture of the hypotheses described in the preceding paragraph. Thus, for example, the hypothesized indirect nature of the effects of parental status (SES) on youths' career plans is reflected by the absence of arrows directly linking SES to occupational and educational expectations, and by the arrows from SES to significant other variables and subsequent arrows from significant other variables to educational and occupational expectations.[1] In addition, the diagram shows important features of the model that were not summarized in the preceding paragraph. For example, educational achievement is shown as affecting occupational achievement, but the casual relationsips between educational and occupational expectations is left unexplained. Also, it is assumed that the unmeasured variables are not correlated with each other.

It should be emphasized that the diagram in Figure 1 is an abstraction of the major theoretical features of the status attainment model; it does not match every detail of any published version of the model, but it does closely parallel the original formulation as presented by Sewell, Haller, and Portes (1969). Most empirical research suggests that at least weak, direct links between the background variables (SES, and mental ability) and, for example, educational expectations must be retained (Sewell, Haller, and Ohlendorf, 1970). A variety of measures of the significant other variables have been used (e.g., Woelfel and Haller, 1971; Kerckhoff, 1971; and Williams, 1972). Finally, the casual specification of the model has been criticized (Hout and Morgan, 1975; and Nolle, 1973). Nevertheless, the causal specifications indicated in Figure 1 will generally be followed in this volume. Although econometric methods for handling more complicated specifications are available (see, for example, Goldberger, 1974), the authors are of the opinion that little can be done with the cross-sectional data available here to resolve disputes about casual order (see Curry, et al., 1976, Appendix D for a defense of this position).

For this project no information was collected about adult career attainments; therefore, the analyses focus on the process of forming career plans. The part of the status attainment model addressed in the remainder of this volume is shown to the left of the vertical, dashed line on Figure 1. Hereafter, this part of the model will be referred to as the baseline model. It is important to recognize, however, that previous research has established links between career plans and career attainments (Sewell, Haller, and Ohlendorf, 1970; Alexander and Eckland, 1975; Wilson and Portes, 1975; and Porter, 1974).

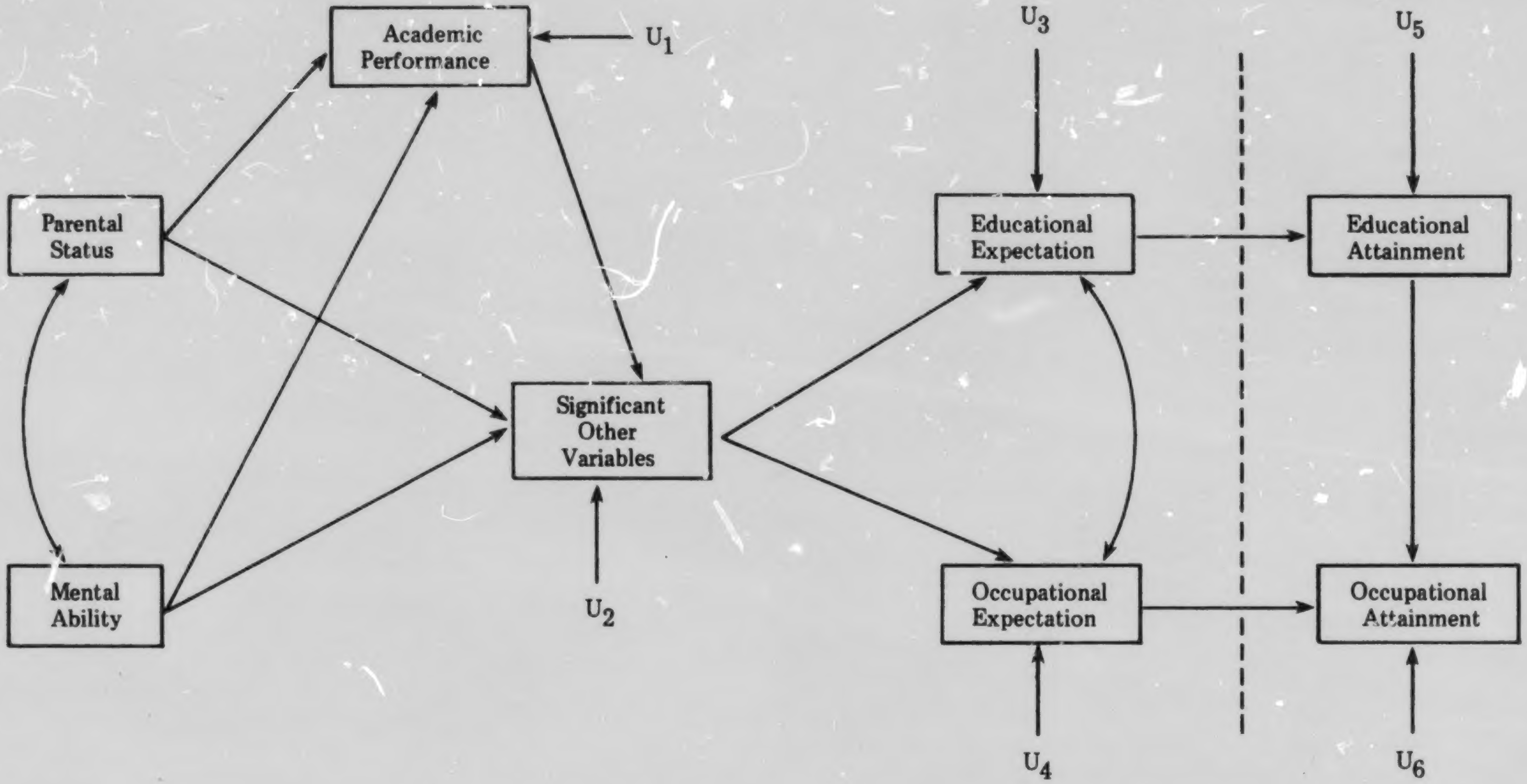

Figure 1. Simplified path diagram of the Wisconsin model of status attainment.

NOTE: The portion of the diagram to the left of the vertical, dashed line represents what is referred to as the baseline model in this report.

The Samples

This discussion is not intended to preempt the material presented in the discussion of methodology, chapter three. The brief summary presented here is designed to sensitize readers to important limits on the comparability between the male and female samples. It should be noted, however, that the samples are comparable in most respects. Both the male and female samples are comprised of Black and White, high school sophomores, approximately balanced by race and sufficiently close in size to have approximately the same sampling variance. Additionally, each high school participating in the male study also participated in the study of females. Although two schools included in the female samples were not part of the male samples, sex comparisons can be carried out by eliminating these two schools from the calculations.

The first major difference between the data for males and that for females resulted from funding constraints. During the study of males information was collected from parental and nonparental significant others of the students, but data collection from nonparental significant others of females had to be abandoned. The fact that nonparental significant others demonstrated differential impact on the career plans of Black and White males (Curry, et al., 1976) suggests that this may be an important limitation on the study of females. Male-female comparisons of the effects of parents on students' career plans are possible with the data in hand, but the comparisons are limited by the fact that inclusion of nonparents might change the estimates of the effects of parents.

The second difference between the samples is that the data for females were collected more than a year after completion of data gathering for males. Whether socio-cultural change is proceeding at a pace fast enough that an approximate one-year interval would generate significant differences in the way females respond to questions concerning career plans is an empirical question beyond the capability of this research to answer.

Finally, the samples of females contain a higher percentage of respondents from broken homes than do the samples of males. Possible effects of this difference cannot be completely evaluated with available data, but some analyses are presented in chapter four to assess the influence of family type.

A Look Ahead

The remainder of this report contains five additional chapters. Chapter two summarizes the research literature and extracts hypotheses regarding the differences and similarities between the processes by which males and females form career plans. Chapter three describes the methodology.

The fourth and fifth chapters present the data analyses. Chapter four contains comparisons between males and females, and between Blacks and Whites; it investigates the degree to which the baseline model can appropriately be applied to females and to Blacks. Since the model was developed for and primarily tested on White males, its applicability to females and Blacks remains an important question (Picou and Campbell, 1975). Chapter five explores possible extensions that the literature suggests should make the baseline model more appropriate for females. Most of the analyses in chapter five do not contain sex comparisons. Instead, attention is centered on expanding the model for females to incorporate measures of the girls' attitudes toward the homemaker role.

Finally, chapter six summarizes the findings and discusses inferences and conclusions that may be drawn from the data.

FOOTNOTES

[1] Throughout this document the terms educational plans and educational expectations and occupational plans and occupational expectations are used interchangably. This reflects the authors judgment that since the questions which tapped expectations incorporated the idea of what the individual "really expected to do most of his/her life" the responses do, in fact, reflect plans.

CHAPTER II

REVIEW OF LITERATURE

Introduction

In recent years a spate of empirical papers including comparisons of status attainment processes for females to processes for males have been published (e.g., Alexander and Eckland, 1974; Chase, 1975; Featherman and Hauser, 1976; Glenn, Ross and Tully, 1974; Hout and Morgan, 1975; McClendon, 1976; Rehberg and Hotchkiss, 1972; Sutter and Miller, 1973; Taylor and Glenn, 1976; Treiman and Terrell, 1975; Tyree and Treas, 1974; Williams, 1975; and Williams, 1972). Three of these papers have concluded that the process of educational and occupational attainment of women is similar to the process for men (Featherman and Hauser, 1976; Treiman and Terrell, 1975; and McClendon, 1976). In contrast, Alexander and Eckland (1974) found that educational attainment of men depends more on measured mental ability than does the educational attainment of women; whereas, women's educational attainment depends more on status background than does that of men—in spite of the higher academic achievement of women. Few studies support Alexander and Eckland's observation that status background is more closely related to attainment of women than of men, however. Featherman and Hauser (1976), Chase (1975) and Glenn, Ross, and Tully (1974) found just the opposite, and McClendon (1976) and Treiman and Terrell (1974) observed small differences between the sexes. Analyses of differential earnings by sex have universally shown that women earn less than men even when education and occupation are taken into account (Sutter and Miller, 1973; Treiman and Terrell, 1975; and Featherman and Hauser, 1976). A few papers have examined the mobility of women through marriage. Chase (1975) and Glenn, Ross and Tully (1974) found women to be more mobile by marriage than men are through occupational status, but Tyree and Treas (1974) concluded that the two forms of mobility are of about equal magnitude. Taylor and Glenn (1976) conducted an interesting comparison between marriage mobility of women associated with physical attractiveness to that related to the woman's education, finding education to be the dominant variable.

Of the few papers focusing on career planning of youth, most have concluded that the process for females is similar to that of males (Williams, 1975; Williams, 1972; and Rehberg and Hotchkiss, 1972). Although sex differences have been observed, they have generally not been large and are not easy to interpret theoretically. On the other hand, Hout & Morgan (1975) carried out detailed sex-race comparisons, finding several interactions. They found that parental encouragement to attend college had a "significant" effect on students' educational expectations for all four sex-race groups, but that the effect was substantially stronger for Black males than for any other group. On the other hand, Black males were the only group for which peer's college plans showed essentially no effect on educational expectation; this effect was also of marginal "significance" for Black females. In constrast to the other sub-groups, grade-point average of Black males exercised a strong effect on educational expectation, but measured mental ability showed very little direct effect. Contrary to the pattern for educational expectation, the college plans of peers was associated with a substantial effect on occupational expectation of Black males, but the strongest effect of peer plans was observed for Black females. White females were the only group for which peer plans did not show a fairly strong effect on occupational expectation. Parental educational encouragement had a substantial effect on occupational expectation for both male subgroups, but was only weakly related to occupational expectation for Black and White females. Hout and Morgan suggested that this observation may be due to sex-role stereotyping of parents. While the interactions reported by Hout and Morgan provide potentially important empirical background, they do not readily lend themselves to a coherent theoretical interpretation. It should also be noted that the statistical procedures used by Hout and Morgan do not appear to conform to the standard rules for identifying the coefficients in a structural equation.[1] However, since the method of estimation is not formally stated, it is difficult to assess the consequences of the departures from standard procedures.

Although these papers have helped to fill important gaps in available information about career planning and career attainments of women, at least two topics of immediate importance to this report have not been thoroughly investigated. (1) Research concerning the role of significant others on the career aspirations of females is minimal. (2) Falk and Cosby (1974) noted that the status attainment model fails to investigate factors such as the homemaker role that may be particularly important to the status attainment of women. The pausity of empirical data is even more acute for Black females.

A number of theoretical discussions of female roles and socialization are available, however. The following pages focus on several conceptualizations that provide insight into the "special" aspects of career decisions of Black and White females. Specific implications of these writings for the baseline model (see Figure 1) are suggested.

Ambiguity of Female Socialization

The socialization of females in our society has been described as ambiguous (Bardwick and Douvan, 1971; Epstein, 1971). On the one hand, competitive achievement is condoned for women much in the same manner as it is for men. On the other hand, women are expected to be supportive rather than competitive and deferring rather than dominating. The effect of these dual expectations is complicated by the fact that the emphasis on each is not consistent throughout the socialization process. Until the onset of puberty, females tend to be rewarded for achievements similar to those of males. However, with the coming of adolescence, girls are exposed to an alternative set of expectations. There is an increasing emphasis on being noncompetitive in areas defined as the male sphere. This shift in expectations is described by Bardwick and Douvan, as follows:

> It appears that until puberty, academically successful girls evolve . . . a dual self-concept. Both sexes are rewarded for achievement, especially academic achievement. Girls, as well as boys, are permitted to compete in school or athletics without significant repercussions. The girl who is rewarded for these successes evolves a self-concept associated with being able to successfully cope and compete. While there are no negative repercussions and there is a high probability of rewards from parents and teachers as long as her friends are similarly achieving, this girl will feel normally feminine (although questions of femininity are probably not critically important in self-evaluation of prepubertical girls unless they are markedly deviant). With the onset of the physical changes of puberty, definitions of normalcy and femininity change . . . new behaviors and qualities that were rewarded, especially successful competing, may be perceived negatively.
>
> Thus, for a long time, even the girls who are competitive, verbally aggressive, and independent can feel normal, but with the onset of puberty, girls . . . must . . . develop the proper femininity. (Bardwick and Douvan, 1971, pp. 229-230.)

An additional dimension of socialization of females is the primary emphasis placed on popularity, the goal of which is to attract and maintain a love relationship (Bardwick, 1971). Competition and achievement is seen as detrimental to this goal, particularly if women compete against, and outachieve men.

Conflicting expectations tend to generate difficult personal choices for women. Horner (1972) has suggested that achievement-oriented females are, at the same time, afraid to succeed. She described the phenomenon this way:

> Among women, the anticipation of success especially against a male competitor poses a threat to the sense of femininity and self-esteem and serves as a potential basis for becoming socially rejected—in other words, the anticipation of success is anxiety provoking and as such inhibits otherwise positive achievement directed motivation and behavior. In order to feel or appear more feminine, women . . . disguise their abilities and withdraw from the mainstream of thought, activism, and achievement (Horner, 1972, p. 173).

On the other hand, women who adopt a noncompetitive orientation often must cope with inferiority feelings stemming from failure to achieve in competitive settings (Glazer-Malbin and Waehrer, 1972). In either case, problems of role conflict and identity formation impinge on the career-decision-making process.

Socialization and Career Planning: Resolution of Conflicting Roles

The competitive and noncompetitive emphases in female socialization are organized into contrasting roles that define a typical "male" career pattern and a typical "female" career pattern. Men are widely expected to be competitive in pursuit of occupational and financial success; whereas, women are generally expected to exhibit affection and supportiveness in carrying out their primary roles of mother and homemaker. There is relatively little ambiguity in the career expectations for men; all men are expected to be "breadwinners." On the other hand, women are confronted with a choice. They may choose to be exclusively homemakers, or to pursue a career outside the home, or to combine these two options in some fashion. An added dimension is, therefore, important in the career-planning process of women—the degree of emphasis on the roles of homemaker and mother. For women, the decision whether to work in the labor market is the primary decision, and the choice of occupation is a secondary decision (see, for example, Kriger, 1972; or Bailyn, 1965). Bailyn expressed this fundamental point in the following terms:

> In making decisions about a style of life, a woman must choose in ways that men do not choose. And as far as work is concerned, the pattern of her basic decision is the obverse of that of a man. For men, there is no basic choice as to whether or not to work. That a man will spend at least one third of his life in gainful work is a premise on which the plans for his life are based. But for a woman, society creates not a decision, but the necessity for a choice. She must decide whether to include work in her plans, and, if so, how much of her life she should devote to it. If the answer is that she will include work in a serious way, she then arrives at the point at which the career thinking of men begins (Bailyn, 1975: 238).

Since the decision whether to work outside the home is the primary decision for women, it is important to study the contingencies that impinge upon it. Tangri (1972) suggested that parental attitudes and communications about achievement outside the home are important in affecting the decision to work. Gysbers et al., (1968) found that commitment to work is associated with high educational attainment of both parents. There is also evidence that the employment status of the mother is likely to affect attitudes toward working; daughters of mothers who work are more likely to plan to work themselves (Peterson, 1958; Smith, 1968; Tangri, 1972).

The nature of the choice between marriage and work appears to have changed in recent years. Once, the decision to work was assumed to exclude marriage. Where marriage was the woman's preference, work was intended only until the "right man came along" or as insurance against the prospect of remaining single. However, there is evidence accumulating that suggests many women no longer perceive work and marriage as mutually exclusive choices. Epstein and Bonzaft (1972) found that in the first year of college the predominant plan expressed by female students was to combine marriage, children, and a career outside the home. Almquist (1969) found tht college females who planned to have careers did not reject the traditional obligations associated with being female. In their follow-up study of female National Merit Scholars, Watley and Kaplan (1971) found that 85 percent planned to work. Many of the women in these studies clearly intended to depart from the tradition of "staying home," even though they intended to marry. However, Steinman (1970) found that women are ambivalent with respect to home and career. While the young women she studied aspired to a balance between home and career, they still expressed the belief that an "ideal" woman would be more home oriented. Women with this perspective are probably restricted in their career choice and attainments.

Given that a woman has decided to work outside the home, the extent of her participation in gainful employment must still be decided. Fogarty, Rapoport, and Rapoport (1971) found that the decision to work continuously is a very complex one which is intertwined with such phenomena as level of aspiration, and commitment to the general value of women having careers. They found that the most important determinant of intention to work continuously was "the feeling that a career outside the home can provide great personal satisfactions (Fogarty, Rapoport, and Rapoport, 1971: 258)."

Occupational Choice of Women

While there appears to be an increasing acceptance of women working while married, the extent to which females are likely to choose a traditionally "male" occupation is still quite low. Several studies have found that while women may plan to work, most tend to prefer traditionally "female" occupations (Epstein and Bronzaft, 1974; Berman, 1972; Gump, 1972; Rossi, 1965). Women's occupational options continue to be tied to prevailing sex stereotypes of occupations. Entwisle and Greenberger (1970), studying the attitudes of male and female ninth graders, found *both* males and females responded negatively to the ideas of women holding "men's" jobs. There is evidence that sex stereotypes are learned at a very early age and affect the degree to which males and females perceive certain occupations as legitimate choices (see, e.g., Schlossberg and Goodman, 1972; and Meyer, 1970).

It has been suggested that an important contingency affecting the female's choice of occupation is the attitudes of males important in her life (Psathas, 1968). Hawley (1971) found that women's career choices are affected by what they believe men think is acceptable behavior for women. Matthews and Tiedeman (1964) found that high school girls reduced their career commitment when they perceived male disapproval of a girl using her intelligence.

There is also evidence suggesting that men view women as wives and mothers more than as colleagues in the work force. Nelson and Goldham (1969) found that while many men accepted the general idea of women involved in the dual roles of career and wife, they did not accept this duality for their own wives. This finding was supported by Komarovsky (1973) in her study of the sex-role attitudes of male college students. She showed that there was considerable ambivalency among males regarding career-oriented females. While most of these males preferred full-time homemaking for their future wives, many of them valued characteristics associated with career women.

While it is true that most women who decide to work choose occupations that are stereotyped as reserved for females, some women do not. Tangri (1972) and Douvan (1963) provided evidence suggesting that women whose mothers worked were more likely to aspire to non-traditional occupations. While mother's employment status (working, not working) was the best predictor of prefereence for an "innovative" career, Tangri (1972) also found that working mothers' attitudes toward their daughters' choices tend to dampen role innovation. She suggested that this may be due to mothers who have worked at a traditionally female occupation. Tangri (1972) also suggested that daughters with fairly autonomous, but close relationships with their parents are more innovative in their aspirations.

Other studies have found additional factors affecting occupational choices of females. Astin (1968) found high socioeconomic-status girls more likely to have high occupational aspirations. Astin and Myint (1971) found high school girls who choose fields requiring high career commitment (generally "masculine" occupations) also achieved well academically and planned to pursue higher education. Picou and Curry (1973) found that higher status females had higher status occupational choices, that grade point average was positively related to the level of career expectations, and that the more encouragement to attend collage a girl perceived, the higher her educational and occupational goals. Turner (1972) found that higher career orientations among White females were related to parental behavior stressing competitiveness and self-striving attitudes for their daughters. Among Blacks, high career expectations were found to be related to girls' perceptions of preference of significant others.

The Motivation for Achievement Among Women

Several social scientists have suggested that the socialization process produces different motives for achieving among women than it does among men (Douvan and Adelson, 1966; Garai and Scheinfeld, 1968; Lewis, 1968; Verhoff, 1969; Epstein, 1971; Bardwick, 1971; Bardwick and Douvan, 1971). While the socialization of males emphasizes the development of independence and aggressiveness, females are socialized to be dependent on interpersonal support from others. The achievement orientation of females is intricately related to approval of persons who are important to them (e.g., parents, teachers, friends, potential mates). Even those women who do not completely accept traditional sex roles may derive their attitudes from affiliative motives. Thus, "one must look at the relationship between affiliation and achievement motives and consider to what extent achieving behaviors derive from achievement or other motives and whether achieving is perceived as a probable threat to affiliation." (Bardwick, 1971: 172.)

Career Planning of Black Females

The literature cited in the preceding sections has generally focused on White females. This section considers some of the factors that may operate among Black females. The central question is: Does race affect what is considered appropriately feminine behavior, and, if so, how do racial differences affect career decisions of Black females?

Ladner (1972) and Harrison (1973) suggested that the definition of appropriate female roles in Black community differs from that common among Whites. They suggested that the high value placed on achievement among women in the Black community produces a much different environment for the formation of career plans. Harrison explained the phonomena as follows:

> Females in the Black community are highly visible and noted for their strengths, accomplishments in the face of obstacles, and personal sacrifices for their family and the Black community. The young female, therefore, is exposed to successful females and . . . (her) view of what is appropriately female comes from her own community, not from . . . the White world (Harrison, 1973, p. 13).

The work of Weston and Mednick (1972) on the "fear of success" syndrome shows greater acceptance of the successful female in the Black community; they found less manifestation of fear of success among Black women than among White women.

If achievement among women is more valued in the Black community, then what are the implications for the career decisions of Black females? Does this mean they are not as hampered by the restrictive definitions that apply to White females? The literature regarding this issue is permeated by inconsistencies and contains little empirical evidence. However, existing evidence regarding the career decisions of Black females can provide a starting point. We desire to gain some insight about determinants of three related decisions. (1) What factors affect the decision to work or not to work? (2) If one chooses to work, what factors affect the choice of occupation? and (3) What factors affect the extent of labor force participation?

Several studies (Fichter, 1967; Kuvlesky and Obordo, 1972; Turner, 1972) have found Black women to be more likely than White women to expect to work. Blacks are also more likely to expect to work full-time. However, much like White women who expect to work, Black women plan to combine work with marriage and family. Yet the two races differ substantially in the proportion who expect to follow this option. Fictner (1967) and Kuvlesky and Obordo (1972) found that the proportion of Black females who wanted to combine full-time employment with the traditional female roles of wife and mother was approximately double that of Whites. Further, they found the number of White females who wished to be exclusively homemakers was almost twice that of Black women. Turner (1972) in a study of freshmen women at a large university also found that Blacks were far more likely than Whites to expect full-time employment (54% vs. 16%).

Findings indicating that more Black females expect to combine full-time work with marriage and family also suggest that Black women believe that the roles of wife and mother are more compatible with occupational roles than do White women. This is supported by the findings of Gump (1972) in a study of college women. She found Blacks and Whites were significantly different in their endorsement of the traditionally feminine role. Black women tended to espouse both orientations simultaneously, while White women tended to view them as mutually exclusive orientations.

While Black women are more likely to expect to work, more likely to work full time, and less likely to perceive the occupational role and homemaking as mutually exclusive, they also tend to be oriented toward traditionally female occupations. Ficther (1967) found strong similarity among Black and White women in their preference for traditionally female occupations. Berman (1972), in his study of new high school graduates, found that 73.5% of the Black women and 66.8% of the White women chose traditionally female occupations. There is, however, some evidence that Black women constitute a higher proportion of the Black professional class than White women constitute of the White professional class (Bock, 1971). But, it should be remembered that Black males are under represented in the professions. Additionally, Black women are concentrated in fewer professions than White women and the occupations they obtain are more traditionally feminine (Gump and Rivers, 1975). Several studies have found that Black women tend to have higher aspirations than White women (Thorp, 1969; Gist and Bennett, 1963; Dreger and Miller, 1968). In a 1943 study, Thorp (1969) found Black, female high school students expressed higher aspirations than Black males.

One study suggested that the contingencies affecting occupational choice are quite different for Black and White women. Turner (1972) examined the relationship between various demographic, developmental, and attitudinal variables and career expectations among Blacks and Whites. She found virtually no overlap in variables that differentiated level of expectations among Black and White women. Among Whites, high career expectations were associated with parental stress on competitiveness and de-emphasis on obedient behaviors, equalitarian attitudes regarding sex roles, and a high incidence of divorce or separation among parents. High career expectations among Blacks were most strongly related to the perceived expectations of significant others. Black females who had higher expectations thought the important males in their lives preferred, and their mothers expected high work involvement. Turner (1972) reported that Black women tended to want less work involvement than they expected, while the reverse was true for White women. She suggested that Black female's high expectations to work are indicative of their sense of responsibility to others rather than the outgrowth of occupational achievement motivation. Scanzoni (1971) reached a similar conclusion.

Implications for the Status Attainment Model

Two major themes have emerged from the review of literature concerning socialization of women. (1) The first theme is that success goals are more ambiguous for women than for men. In the present context, the most important aspect of this ambiguity stems from the dual emphasis on the importance of occupational roles and home-related roles for women. For men, success is clearly defined in terms of occupational roles, but for women, both occupational roles and roles as homemaker and mother are stressed. In fact, it is probably true that most females are taught to view home-related roles as more important than occupational roles. (2) The second theme is that achievement goals are more conditioned by affiliative motives for women than for men. Hence, one might expect that the opinions of significant others are more important to females.

In the following subsections, these themes are used to suggest hypotheses about the career decisions of females. In the first subsection the basic structure of the baseline model is left intact. Educational and occupational expectations are the ultimate dependent variables, and the independent variables match those used for males. Hypotheses are developed about the manner in which one might expect the pattern of the effects of those independent variables to differ for males and females. The second subsection considers hypotheses that explicitly incorporate females's expectations regarding home-related roles. The final subsection contains commentary indicating the limitations of the hypotheses.

The baseline model. The baseline model as represented in Figure 1 was developed for, and primarily tested on White males; nevertheless, it provides a convenient starting point for analysis of the career expectations of females. As a general proposition, it does seem likely that parental status, mental ability, academic performance, and the opinions of significant others affect educational and occupational expectations of females, as is postulated in the baseline model. The arguments justifying this position are the same as those advanced in support of the model for males and have been ably stated elsewhere (e.g., Sewell, Haller, and Portes, 1969; Sewell, Haller, and Ohlendorf, 1970; Sewell and Hauser, 1972; and Haller and Woelfel, with Fink, 1969). Although the evidence is mixed, the empirical work comparing status attainment models for males and females cited in the early pages of this chapter also lends some support to this general proposition. On the other hand, given the differences between the socialization of males and females identified in the two major themes drawn from the literature, it would be surprising if the magnitude of the effects of each independent variable on educational and occupational expectations of females were exactly the same as the effects observed for males. The following paragraphs propose specific hypotheses about the way in which socialization differences between males and females are likely to be reflected in differential effects of the independent variables on educational and occupational expectations.

If, as suggested in theme one, home-related roles are of equal or greater importance than occupational roles for women, then occupational choice is likely to be less salient for women, and therefore, subject to more uncertainty. Uncertain choices are not likely to be systematically related to any variable. Hence, it is hypothesized that:

Hypothesis 1: The effects of all independent variables on the occupational expectations for females is smaller than the corresponding effects for males.

To the extent that education is instrumental in preparing for an occupation, this hypothesis should apply when educational expectation is substituted for occupational expectation as the dependent variable (see Kerckhoff, 1971: 36). Thus, it is also hypothesized that:

Hypothesis 2: The effects of all independent variables on educational expectation for females is smaller than the corresponding effects for males.

Since hypothesis two depends on the instrumental roles of education in preparing for an occupation, and education serves numerous goals not associated with occupational preparation, hypothesis two is not likely to be as strongly supported as hypothesis one.

From theme two it was concluded that the opinions of significant others are probably more important to females than to males. This premise translates immediately into two specific hypotheses that can be tested with data available for this report:

Hypothesis 3: The effect of significant others' educational expectations of students on the students' own educational expectations is stronger for females than for males.

Hypothesis 4: The effect of significant others' occupational expectations of students' own occupational expectations is stronger for females than for males.

It is important to note that the first two hypotheses partially contradict hypotheses three and four. Hypotheses one and two indicate that *all* independent variables are *less* strongly related to educational and occupational expectations of females than to educational and occupational expectations of males; whereas, hypotheses three and four state that significant others' expectations of students are *more* strongly related to females own educational and occupational expectations than is the case for males. Hypotheses one and two are associated with the general theme in the literature that females' success goals are more ambiguous than are those of males, and hypotheses three and four are associated with the theme that females are more highly dependent on affiliative motives than are males. While the hypotheses associated with these themes are partially contradictory, it is not immediately apparent that the themes, stated in general terms, are contradictory. One might, therefore, inquire about the pattern to be expected in the data if both themes are true. Informally, it seems that if both themes are true, then all variables except significant other variables should be less closely related to educational and occupational expectations of females than to those of males. The fact that the first theme tends to suppress the relationship between significant other variables and educational and occupational expectations, and the second theme tends to inflate those relationships, suggests that significant other variables should be related to educational and occupational expectations of females to about the same degree as is the case for males.

Limited evidence was presented suggesting that Black females are as highly dependent on significant others as are White females, but that Black females are probably less ambivalent about occupational careers than are White females. Four hypotheses may be drawn from this evidence; if Black females are less ambivalent about occupational careers, then one would expect that:

Hypothesis 5: All independent variables affect occupational expectations for Black females more strongly than they affect occupational expectations for White females.

To the extent that education is instrumental in preparing for an occupation, one would also expect that:

Hypothesis 6: All independent variables affect educational expectations for Black females more strongly than they affect the educational expectations for White females.

If Black females are less ambivalent about occupational careers and, like White females, they are more dependent on significant others than are males, then it is reasonable to hypothesize that:

Hypothesis 7: The effect of significant others' educational expectations of students on the students' own educational expectations is higher for Black females than for other subgroups.

Hypothesis 8: The effect of significant others' occupational expectations of students on the students' own occupational expectations is higher for Black females than for other subgroups.

These hypotheses regarding Black females should be considered highly tentative. First, understanding of the effects of racial discrimination on the status-attainment process is limited. It is possible that discrimination, by restricting the range of occupations open to Blacks, renders occupational planning among Blacks less salient than for Whites. If this speculation is true, then one would expect lower relationships between all independent variables and occupational expectation for Blacks, thus tending to negate the above hypotheses. Secondly, available data do show uniformly lower relationships among status attainment variables for Black males than for White males (see Curry, et al., 1976; Porter, 1974; Hout and Morgan, 1975); it is likely that these results also occur for females. If career planning is less salient for Blacks of both sexes, then Black females should be compared to Black males rather than to the comparison groups indicated in hypotheses five through eight.

Home-career expectation. In this report the term home-career expectation is used as a convenient shorthand indicating the degree to which females expect to emphasize occupational roles as compared to home-related roles. High values of the variable reflect emphasis on occupational roles. The intent of this subsection is to develop hypotheses about females' career planning that include home-career expectation.

Since strong emphasis on homemaking and child care is undoubtedly detrimental to achievement in demanding, high-status occupations, women placing a strong emphasis on the importance of the home should choose lower-prestige occupations than women de-emphasizing the home. This argument is expressed in the following hypothesis:

Hypothesis 9: Home-career expectation is positively related to occupational expectation for females, *ceteris paribus.*

If emphasis on the home is associated with early marriage, and to the extent that education is viewed as instrumental to occupational achievement, the preceding hypothesis should also apply to educational expectation. Thus, it is postulated that:

Hypothesis 10: Home-career expectation is positively related to educational expectation for females, *ceteris paribus.*

For those females who do emphasize occupational roles (i.e., score high on home-career expectation), occupational choice should be less random than for females in general. This argument suggests the following hypothesis:

Hypothesis 11: For females scoring high on home-career expectation, the effects of all independent variables on occupational expectation should more closely approximate the effects observed for men than is the case for all females combined.

Paralleling the connection between hypotheses one and two, to the extent that education is viewed as instrumental in preparing for an occupation, hypothesis eleven should also apply to educational expectation.

Hypothesis 12: For females scoring high on home-career expectation, the effects of all independent variables on educational expectation should more closely approximate the effects observed for men than is the case for all females combined.

If, as suggested by the two themes drawn from the literature, the relative importance of home-related roles and occupational roles is the object of important career decisions among females, and females are highly dependent on the opinions of significant others, then the following hypothesis is suggested:

Hypothesis 13: The home-career expectations of significant others for girls should affect the home-career expectations of the girls for themselves.

Commentary. At least two reservations must be expressed about these hypotheses. First, the evidence supporting the premises (i.e., the two major themes in the literature) from which the hypotheses were drawn is slim. This is particularly true of the hypotheses concerning Black females (hypotheses 5 through 8). Secondly, the logic connecting the hypotheses to the premises is informal; hence, the relationships between the hypotheses and the premises remains imprecise and undoubtedly rests on unstated assumptions. Empirical tests of the hypotheses, therefore, will not be considered tests of the premises.

FOOTNOTES

[1] The number of "predetermined" variables omitted from the equations for educational and occupational expectations did not equal or exceed the number of endogenous variables retained, as required.

CHAPTER III

METHODOLOGICAL PROCEDURES

Introduction

This chapter is divided into four major sections: (1) description of the sample; (2) identification, selection, and development of variable instrumentation and operationalization; (3) data collection procedures; and (4) analytic procedures.[1]

The Sample

The sample is balanced by race and school; Black and White subpopulations within each of the 14 schools that participated in the study were treated as a strata. However, within schools numbers of each race were sampled only if the corresponding racial subpopulation were large enough to permit sampling. For example, in a school with three White sophomore females, no White subjects would be selected. Four of the participating schools had too few Blacks to sample and two had too few Whites.

A sample balanced by race allows between-race comparisons of relationships between variables, since a large sample size for each group is assured by the stratified sample. However, by definition a racially balanced sample makes it impossible to have a "representative" sample in which the proportion of Blacks in the total sample reflects the proportion in the population.

Initially, a list of all sophomore females, within each of the high schools participating in the study was compiled, separately for each race. A table of random numbers was then generated on the basis of the number of females in the sophomore class of each high school. A subsample was selected using the appropriate table of random numbers from each race-school group. Approximately twice as many students as were required for the sample were selected. As students were selected, they were numbered sequentially beginning with the first student selected. Once this procedure was completed, the samples of each racial group in each school were selected from among candidates in the list. Upon identifying this primary sample from each school, consent forms were mailed to the parents of selected youth. If parental consent were granted, the child was confirmed as a participant in the study. For the relatively few cases in which parents did not allow their child to participate in the study, replacements were selected from the remaining names on the list. This procedure insured that there were 150 Black females and 150 White females in the sample at the time data collection began. After attrition, the sample included 119 Blacks and 127 Whites. (See Curry, et al., 1976, Chapter III for a description of the male sample).

In order to test the representativeness of the sample, distributions of selected demographic characteristics of the parents of the students in the sample were compared to the Census, matching as closely as possible on age, marital status, race and family compositions.[2] Sample data were compared to data from the Columbus metropolitan area; the Columbus SMSA, Franklin County, Ohio; the North Central Census Region SMSA's, and the aggregate of all SMSA's in the country.[3] Full details of these comparisons are reported in Appendix A; in summary, discrepancies between the sample and population proportions are generally within margins that may be attributed to sampling error, except that non-intact families are over represented in both samples of females. Possible effects of this over representation on the findings cannot be fully evaluated with available data. However, some efforts to assess possible effects will be reported in the next two chapters.

The Variables: Instrumentation and Operationalization

The selection of variables was shaped by the primary objective of the research—identifying the sources of interpersonal influence on the career-decision-making process of high school youth. Time and funding constraints precluded extensive measurement work; therefore, variables were selected that past research had identified as important to the career-decision-making process, and measurement was based on the best available operationalization, in the judgment of the authors, reported in the professional literature.

The majority of instrumentation had previously been used in the first stage of this project to collect data from the male samples. Student reactions to the stimulus items used in the study of males convinced the staff that little modification would be required for the female study. Some minor changes in wording were made, however, to reflect the shift from male to female respondents. For example, feminine pronouns were substituted, where appropriate, for masculine pronouns, but the content of the items was not significantly altered. In addition, several new questions were included for females. These new items had been used in previous research, and it was assumed that they would not have to be altered for the present study.

The new items focus primarily on attitudes toward home and family roles of women. Several questions were asked of the daughters. These include expected age at marriage, fertility plans, perception of how much independence a woman has in American society, and several questions regard- the relative importance of paid employment as compared to homemaker roles. Both parents of each girl were asked questions paralleling those asked of their daughters. For example, parents were asked to state the age at which they expected their daughter to marry. In addition, each mother was asked to list her own age at marriage, her own history of combining paid employment and homemaker roles, and her speculation about how she would combine paid employment and homemaker roles if she were to choose again.

Not every variable appearing in the questionnaires is used in the report; for easy reference, those that do appear in the report are listed and briefly defined in Table 1. More detailed, operational definitions of each variable appear in Appendix B, and the questionnaire items used in each operational definition appear in Appendix C.

Referring to Table 1, if career planning is somewhat broadly defined there are four career planning variables—daughter's expected age at marriage (variable 19), daughter's home-career expectation (variable 20), student's educational expectation (variable 34), and student's occupational expectation (variable 35). The constructed adjective, "home-career" may require some clarification. In this report it is intended to indicate the relative importance of paid employment as compared to roles in the home such as child care, housekeeping, and conjugal roles.

The term significant other refers to persons such as parents, teachers, and peers who may influence attitudes, beliefs and behaviors of the youth. In this report variables involving significant others' attitudes and behaviors relating to the students' career plans are referred to as significant other variables. At least one significant other variable corresponds to each of the career planning

DEFINITIONS OF THE VARIABLES

	Variable Name	Mnemonic	Definition
1.	Parental socioeconomic status	SES	The average of the father's occupational status, the father's education and the mother's education (variables, 2, 3, and 5)
2.	Father's occupational status	FO	The status of the father's occupation at the time of the interview as defined by a Duncan SEI score
3.	Father's education	FE	Father's educational attainment—based on the number of years and type of education completed
*4.	Mother's occupational status	MO	The status of the mother's occupation, if she was working at the time of the interview, as defined by a Duncan SEI score
5	Mother's education	ME	Mother's educational attainment—based on the number of years and type of education completed
6.	Mother's work status	MWS	Composed on three categories: mother working full time, mother working part time, and mother not working
7.	Family size	FS	The number of children in the family, including the respondent
8.	Number of brothers	#BRO	The number of brothers of the respondent
9.	Number of sisters	#SIS	The number of sisters of the respondent
10.	Family type	FT	Composed of two categories: intact home (i.e., both parents living in the home) and broken home (i.e., one or both parents not living in the home)
11.	Mental ability	MA	IQ as measured by the Henmon-Nelson test
12.	Academic performance	AP	Grade-point average of academic subjects taken from school records
*13.	Father's expected age at marriage for daughter	FAM	The age at which the father expected his daughter to get married, as expressed by the father
*14.	Father's home-career expectations for daughter	FH–CE	The father's expectation of his daugher regarding the relative emphasis she will place on homemaker and work roles as an adult, as expressed by the father

Table 1—Continued

	Variable Name	Mnemonic	Definition
*15	Father's general home-career orientation	FH—CG	The father's attitude toward the relative importance of homemaker and work roles for women in general, as expressed by the father
*16	Mother's expected age at marriage for daughter	MAM	The age at which the mother expected her daughter to get married, as expressed by the mother
*17.	Mother's home-career expectation for daughter	MH—CE	The mother's expectation of her daughter regarding the relative emphasis the daughter will place on homemaker and work roles as an adult, as expressed by the mother
*18.	Mother's general home-career orientation	MH—CG	The mother's attitude toward the relative importance of homemaker and work roles for women in general, as expressed by the mother
*19.	Daughter's expected age at marriage	AM	The age at which the daughter expected to get married
*20.	Daughter's home-career expectation	H—CE	The daughter's expectation regarding the relative emphasis she will place on homemaker and work roles as an adult
*21.	Daughter's general home-career expectation	H—CG	The daughter's attitude toward the relative importance of homemaker and work roles for women in general
22.	Parent's educational expectation for daughter/son	EEP	The average of the mother's and father's educational expectation for daughter/son (see variables 23 and 24)
23.	Father's educational expectation for daughter/son	EEF	The level of education that the father expected of his daughter/son—based on the number of years and type of education, as expressed by the father.
24.	Mother's educational expectation for daughter/son	EEM	The level of education that the mother expected of her daughter/son—based on the number of years and type of education, as expressed by the mother
25.	Parent's occupational expectation for daughter/son	OEP	The average of the mother's and father's occupational status expectation for daughter/son (see variables 26 and 27)
26.	Father's occupational expectation for daughter/son	OEF	The occupational status expectation (measured by the Occupational Aspiration Scale) that the father held for his daughter/son as expressed by the father

Table 1—Continued

	Variable Name	Mnemonic	Definition
27.	Mother's occupational expectation for daughter/son	OEM	The occupational status expectation (measured by the Occupational Aspiration Scale) that the mother held for her daughter/son as expressed by the mother
28.	Aggregate, perceived significant other variable for education	PSOE	The average of the encouragement to attend college received from parents and from teachers and of peer plans to attend college, as reported by the student (see variables 29, 32 and 33)
29.	Perceived parents' educational encouragement	PEE	The average of the encouragement to attend college received from the mother and from the father, as reported by the daughter/son (see variables 30 and 31)
30.	Perceived father's educational encouragement	FEE	The amount of encouragement to attend college received from the father, as reported by the daughter/son
31.	Perceived mother's educational encouragement	MEE	The amount of encouragement to attend college received from the mother, as reported by the daughter/son
32.	Perceived teachers' educational encouragement	TEE	The amount of encouragement to attend college received from teachers, as reported by the student
33.	Perceived peer college plans	PP	Based on the proportion of the student's peers who planned to attend college, as reported by the student and not by his/her peers
34.	Student's educational expectation	EE	The level of education that the student expected to achieve, based on the number of years and type of education
35.	Student's occupational expectation	OE	The status of the occupation (in Duncan SEI scores) that the student stated she/he expected to enter
36.	Race	RACE	The race of the student, Black or White
37.	Sex	SEX	The sex of the student, female or male

*This variable was not collected from the samples of males and their significant others.

variables listed in the preceding paragraph. For example, parents' educational expectation for daughter/son (variable 22) corresponds to student's educational expectation (variable 34). In all, there are 18 significant other variables (variables 13 through 18, and variables 22 through 33).

There is one additional category of variables that will be frequently referenced throughout this report. The first 11 variables are exogenous variables. The term exogenous variable comes from the econometric literature and refers to independent variables that may affect other variables in a system of variables ("endogenous" variables) but are, themselves not affected by any other variable in the system. Parental status (variable 1) and mental ability (variable 11) are the most important exogenous variables in this report.

There are three important distinctions among the significant other variables: (1) Significant other variables that were measured by asking the student, rather than the significant other, for the students' perception of the significant other's attitudes, beliefs, or behaviors are referred to in this report as "perceived" significant other variables (see variables 28 through 33). In contrast, "objective" significant other variables were measured by asking the significant other for the desired information (see variables 13, 14, 16, 17, and 22 through 27). (2) The distinction between significant other' expectation of students and encouragement offered to students is also important. Significant other expectation denotes the realistic appraisal of what a significant other thinks the student will do (see variables 13, 14, 16, 17, and 22 through 27); whereas, significant other encouragement variables involve the degree to which a significant other attempts to persuade students to believe or act in accordance with the significant other's wishes (see variables 28 through 32). (3) Finally, significant other variables may differ according to whether the significant other's attitude or behavior refers to the student's educational plans (variables 22 through 24, and 29 through 33), occupational plans (variables 25 through 27), or home-career related plans (variables 13, 14, 16, 17).

Prior to data collection, all instrumentation was submitted to a standard review within the National Center for Research in Vocational Education. The review consisted of two phases. The first phase was a technical evaluation, and the second phase was a review to insure protection of human subjects. Additionally, the program staff carried out a separate evaluation; each instrument was reviewed by Center staff members who were not working on the project for clarity and readability at the high school sophomore level. Wording revisions that did not change content were made in response to the judgment of these staff.

Data Collection

Data collection proceeded in two phases: (1) collection of data from the students identified as part of the primary sample, and (2) collection of data from the students' parents. In the first phase all of the students sampled in a single school were surveyed as a group in two, four-hour sessions; the two sessions occurred on successive days. Although students were brought together as a group and given questionnaires to complete, an interview team was constantly available to monitor progress and answer questions. No questions were permitted, however, during administration of the Henmon-Nelson intelligence test and the Edwards Personal Preference Schedule. These exceptions were made because both instruments are standardized schedules requiring unassisted responses.

Several steps were taken to help assure the integrity of responses to the questionnaires. First, each subject was paid eight dollars for participating in the study. A second procedure was to match, as closely as feasible, the race and sex composition of the interview team to that of the group of student respondents. In two of the fourteen schools, however, this matching was not exact. In these

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two schools, all of the students were Black and the interview team was composed of two Black interviewers and one White interviewer. The intent of the matching was to promote rapport between the interview team and the students. To further assure rapport, an attempt was made to involve all members of the interview team equally in the presentation and administration of instruments. While differences in presentation of self among interviewers may have resulted in differential involvement, the rapport of the students did not appear to be affected. A final strategy employed to assure the quality of the data was to conduct a briefing just prior to administration of the questionnaires. The students were informed about the purposes and objectives of the research, the importance of honest responses, and the potential impact of the research on education.[4]

The second phase of the data collection was to collect information from the parents of each participating student. At the end of the first day of the student sessions each respondent was given a packet containing questionnaires for their mothers and fathers and asked to return the completed questionnaires at the beginning of the second session. Those parents who were not able to complete questionnaires on the evening they were taken home, were encouraged to complete them at their leisure and return them in the stamped, addressed envelope included for that purpose. Finally, parents who did not respond within two weeks of receipt of the questionnaires were contacted by personal interviewers in a final attempt to gain completion of the parental questionnaires. This technique resulted in a relatively high response rate from parents. Table 2 indicates response rates of mothers and fathers by race and sex of the students. Much of the difference in the response rates between the two studies is due to the lower response rates of the fathers of Black females. One would expect this result, however, since more nonintact families were sampled for females, especially for Black females (see Appendix A). From those parents that were available in the home, the response rate was considerably greater than the overall response rate. Over ninety-five percent of the parents who received a questionnaire returned a completed questionnaire.

TABLE 2

RESPONSE RATES OF PARENTS BY RACE AND SEX OF STUDENTS

	Parents of Female Students		**Parents of Male Students**	
Race of Student	Fathers	Mothers	Fathers	Mothers
Black	50.4%	80.7%	71.3%	90.5%
White	81.9%	92.1%	85.8%	95.5%
Total for both parents and both races	76.6%		85.8%	

Method of Analysis

Since the purpose of this research is to investigate systems of relationships among variables, a casual imagery is of considerable, hueristic value.[5] Path analysis is therefore used as the chief analytic tool. Throughout the analysis "standardized path regression coefficients" are reported. The term, standardized-path-regression coefficient, is used to distinguish them from path coefficients or path-regression coefficients. Both path coefficients and path-regression coefficients set limits on comparability of models. The former allow comparison of effects across variables within a subsample but do not permit comparisons of effects across subsamples. Path-regression coefficients permit comparisons of the effect of a specific variable across subsamples, but, unless all variables are measured on a common scale, they do not allow comparisons of effects across variables within subsamples (see Wright, 1960; Duncan, 1966; Land, 1969; or Hotchkiss, 1976). Standardized-path-regression coefficients, by setting all variables to a common scale across all subsamples, allow simultaneous comparison of effects across variables and subsamples. Detailed discussions of this procedure are available in Curry, et al., (1976) and Hotchkiss (1976).

Throughout the analyses it is assumed that the algebraic form of the structural equations is linear. There is ample precedent for this assumption in the status-attainment literature; practically every study in that literature assumed linearity (e.g., Sewell, Haller, and Portes, 1969, Duncan, Haller and Portes, 1969, Duncan, Haller and Portes, 1968; Hauser, 1972; Porter, 1974, Alexander and Eckland, 1975; Woelfel and Haller, 1972; Featherman and Hauser, 1976; Otto, 1976; Hout and Morgan, 1975; Williams, 1972; Picou and Carter, 1976; Kerckhoff and Huff, 1974; and Sewell, Haller and Ohlendorf, 1970). In addition, tests of the linearity assumption have not shown significant departures from linearity in status attainment variables (Gasson, Haller, and Sewell, 1972 and Wilson and Portes, 1975). If the linearity assumption is wrong, however, relationships reported in this monograph will understate the true degree of relationship. More importantly, the description of the process will be in error. Nevertheless, the authors believe that the linear assumption is defensible for two reasons: (a) Past research, cited above, has shown little evidence of departure from linearity. In addition, the authors' experience with exploratory calculations in the past indicate few important departures from linearity. (b) Linear equations lend a parsimony to the analyses that is essential. There are literally infinite ways that data can depart from linearity. To test for all of these, ANOVA designs including all higher order interactions are necessary. The sample sizes for this report are not sufficient to permit such analyses.

Path coefficients were calculated from correlation matrices in which each correlation was based on cases without missing data for either variable. Hence, different correlations in the same matrix may be based on different numbers of observations. Such differences were generally minimized, however, by substituting the daughter's or son's reports of parental status in cases where data from the parent was missing (see Appendix B).

FOOTNOTES

[1] This chapter is a modified version of Chapter three in Curry et al., (1976). The methodology used here is similar to methodology used in the Curry et al. (1976) since the present report about females is an approximate replication of the earlier study of males. However, the methodological considerations for the comparison across studies (males vs. females) is outlined in this chapter. Also, the procedures dealing with the home-career orientation items unique to the female study are presented.

[2] Parental data was gathered from parents, not from students. This procedure is described in a later section.

[3] SMSA refers to the Standard Metropolitan Statistical Area. The term is defined in any volume of the summary census tables.

[4] Picou (1975) has presented a detailed argument from the perspective of theory and research for this type approach in minority research.

[5] The term casual imagery is employed in recognition of the impossibility of establishing cause, in the literal sense, in empirical work. It is outside the scope of this report to give a detailed review of the controversy surrounding the concept of "cause." The reader is referred to any number of sources dealing with the meaning of cause, (e.g., Cohen and Nagel, 1934; Simon,1957; Bunge, 1959; Nagel, 1961; Blalock, 1964).

CHAPTER IV

ANALYSIS OF THE BASELINE MODEL

Introduction

This chapter and the next chapter contain the empirical results of the study. This chapter focuses on comparisons of several versions of the baseline model (Figure 1) for males to the same model calculated for females. Recall that the model was developed for males and primarily tested on samples of males. The intent of this chapter is to determine to what extent the baseline model can be applied to females. The baseline model, however, does not account for the special importance of home-career expectation to females that is hypothesized in the literature. The next chapter, therefore, focuses on home-career expectations of the female samples.

All analyses in the report are conducted separately by race; this analysis strategy is based on the findings of the study of males. In that research Curry and associates (1976, Chapter V) found that Black and White males demonstrated sufficient differences in the career-decision-making process to warrant continued control for race.

Throughout the remainder of the report the variables are referred to by shortened approximations to the variable names listed in Table 1; this is done to improve readability. For example, "student's educational expectation" is frequently referenced simply as educational expectation, and "Parents' educational expectation for daughter/son" is frequently referred as parental educational expectation. To avoid ambiguity, however, references to a variable are frequently accompanied by the corresponding variable number contained in parentheses following each variable name. The variable numbers match the assignment of numbers to variables in Table 1 and in Appendix B.

The data in this chapter are relevant to the first eight hypotheses proposed in chapter II—hypotheses regarding sex differences in the magnitude of effects of the independent variables in the baseline model on educational and occupational expectation (34 and 35.)[1] The next three sections of the chapter present the basic data and discuss issues that are not directly related to testing the hypotheses. The first of these sections deals with selecting an appropriate set of exogenous variables for use in estimating educational and occupational expectations of females. The second section compares two versions of the baseline model—one based on a significant other variable operationalized by data collected from students and one based on significant other variables measured by data collected from significant others. The third section presents a refinement of the model based on data collected from significant others. After presentation and discussion of the data, a section is devoted to comparisons of the hypotheses to the empirical results. A final section summarizes the findings.

Exogenous Variables

This section examines the relationship between several exogenous variables and the ultimate dependent variables—educational expectation (34) and occupational expectation (35). Two purposes are served: (a) establish a set of exogenous variables appropriate for females that can be used as control variables in the subsequent analyses of significant other influence on educational and occupational expectation, and (b) estimate the total effects of the exogenous variables on educational and occupational expectation. The analysis begins by considering the exogenous variables used in the study of males—parental status (1) and mental ability (11). The analysis is then expanded by adding family type (10) and family size (7) to the set of exogenous variables, and by disaggregating the index of parental status.

Table 3 presents standardized-path-regression coefficients for the case in which parental status and mental ability comprise the set of exogenous variables.[2] For males, the exogenous variables are related to the dependent variables, although the relative importance of status (1) and mental ability (11) differs for Blacks and Whites. The effects of status on both educational and occupational expectation are of similar magnitudes for Blacks and Whites, but the effects of mental ability are substantially greater for White males than for Black males, whichever dependent variable is considered.

TABLE 3

STANDARDIZED-PATH-REGRESSION COEFFICIENTS FOR REDUCED FORM EMPLOYING TWO EXOGENOUS VARIABLES FOR RACE/SEX SUBSAMPLES

Race/Sex Subsample	Dependent Variables	Intercept	Exogenous Variables		R^2
			SES (1)	MA (11)	
Black Females (n=107)	EE (34)	.331*	.116	.144	.024
	OE (35)	.295*	.134	.143	.040
Black Males (n=117)	EE (34)	.204*	.265	.166*	.099*
	OE (35)	.074	.314*	.092	.084*
White Females (n=119)	EE (34)	–.403*	.264*	.338*	.312*
	OE (35)	– .041	.098	.193*	.069
White Males (N=131)	EE (34)	–.327*	.260*	.459*	.337*
	OE (35)	–.455*	.244*	.442*	.265*

*P (Coefficient = 0) $\leq$ .05 (one-tail test)

For Black females, on the other hand, neither educational nor occupational expectation (34 and 35) is closely associated with the exogenous variables. This is shown in Table 3 by the weak and nonsignificant standardized-path-regression coefficients and multiple coefficients of determination for Black females. The educational expectations (34) of White females are associated with the exogenous variables to much the same degree and in much the same manner as for White males. This is not the case with occupational expectation (35), although the relative effect of SES (1) and mental ability (11) is similar for White males and White females.

While the primary purpose of this report does not allow extended exploration of exogenous variables, two variables examined in the report on males are given further attention—family size (7) and family type (10). These variables did not prove to be of sufficient impact to be kept in the models for males (Curry, et al., 1976), but female expectations may demonstrate different patterns of association. Additionally, the large number of nonintact families in the female subsamples necessitates investigation of the impact of family type on the dependent variables (see Appendix A of this report). Table 4 presents the expanded model including the additional exogenous variables for the four race/sex subsamples.

TABLE 4

STANDARDIZED-PATH-REGRESSION COEFFICIENTS FOR EDUCATIONAL AND OCCUPATIONAL EXPECTATIONS IN REDUCED FORM EXPANDED TO INCLUDE FAMILY SIZE AND FAMILY TYPE

Race/Sex Subsample	Dependent Variables	Intercept	Exogenous Variables				R^2
			SES (1)	MA (11)	FS (7)	FT (10)	
Black Females (n = 119)	EE (34)	.355*	.072	.049	–.204*	.035	.071
	OE (35)	.271*	.133	.064	–.115	.097	.072
Black Males (n = 117)	EE (34)	.257*	.247*	.165	–.081	.119	.111*
	OE (35)	.131	.297*	.092	–.075	.128	.095*
White Females (n = 127)	EE (34)	–.411*	.284*	.340*	.091	.025	.319*
	OE (35)	–.046	.098	.194	.002	.006	.069
White Males (n = 131)	EE (34)	–.342*	.254*	.432*	–.121	–.004	.346*
	OE (35)	–.259	.230*	.386*	–.222*	.295	.307*

*P (Coefficient = $<$ .05 (one-tail test)

Addition of the two new exogenous variables has not materially affected the results. Although the coefficient for family size (7) on educational expectation (34) for Black females is significantly negative, the increase in the coefficient of determination is small. While an increase of nearly 300 percent might be viewed as large, it is the opinion of the authors that when such an increase is obtained by raising the coefficient of determination from .024 to .071 the result is of little substantive importance, particularly when statistical significance is not achieved by the increase. The only other significant coefficient for family size or family type is that between family size and occupational expectation for White males. Hence, it is concluded that family size and family type can safely be excluded from subsequent analyses.

It is also possible that the model for females is significantly more accurate when socioeconomic status is disaggregated into its component parts—father's occupational status (2), father's education (3), and mother's education (5). The coefficients for the effect of father's occupation, father's education, mother's education and mental ability on educational and occupational expectation (34 and 35) are presented in Table 5.

TABLE 5

STANDARDIZED-PATH-REGRESSION COEFFICIENTS FOR REDUCED FORM EMPLOYING DISAGGREGATED SOCIOECONOMIC STATUS AND MENTAL ABILITY AS EXOGENOUS VARIABLES FOR BLACK AND WHITE FEMALES

Race Grouping	Dependent Variables	Independent Variables				R^2	Intercept
		FO (2)	FE (3)	ME (5)	MA (11)		
Black	EE (34)	.114	−.139	.196	.106	.105	.328*
Females	OE (35)	.090	−.125	.225*	.105	.082	.284
White	EE (34)	.123	−.011	.221*	.360*	.328*	−.397*
Females	OE (35)	−.234*	.189*	.135	.218*	.127*	−.001

*P (Coefficient = 0) $\leqslant$ .05 (one-tail test)

Disaggregation of socioeconomic status increases the coefficients of determination for both female subgroups (compare Table 5 to Table 3). However, the pattern of statistical significance of the R-squares remains unchanged when compared to the model employing aggregate socioeconomic status (1). The lack of statistical significance in the coefficients of determination for the Black females implies that the significant effects of mother's education (5) should not be considered important. The major observation in the data is that disaggregation of SES (1) does not significantly improve the accuracy of the model for Black females. The disaggregation has, however, increased the R-square associated with occupational expectation (35) for White females. Nevertheless, subsequent analyses are probably best conducted using the aggregate measure of parental status (1). The reasons for this choice are presented in the following discussion, some of which anticipates analyses in later sections of the chapter.

Two important advantages are associated with using aggregate SES (1) rather than its component parts (variables 2, 3, and 5): (a) First, the aggregate model is substantially more parsimonious than the disaggregate model. In the largest model in this chapter the aggregation eliminates fourteen coefficients that would otherwise have to be estimated and interpreted. (b) Secondly, the smaller number of independent variables resulting from using aggregate SES increases the power of statistical tests of significance by reducing the degrees of freedom due to analysis, thus increasing the stability of estimates.

These advantages would not be sufficient to justify aggregation of SES (1), however, were disaggregation to: (a) substantially increase the coefficients of determination associated with educational or occupational expectation (34 and 35), (b) substantially alter the estimates of direct effects of academic performance (12) and/or significant other variables on educational or occupational expectation, or (c) produce large changes in the estimates of indirect effects of the exogenous variables on educational or occupational expectation. The last two points are of particular importance.[4]

In addition, there is precedent for using either aggregate or disaggregate SES (1). For example, in the same issue of the *American Journal of Sociology,* Alexander, Eckland, and Griffin (1975) investigated the status attainment process using disaggregate socioeconomic status, while Wilson and Portes (1975) investigated the same process using aggregate socioeconomic status.

The analyses reported in this section suggest that SES (1) and mental ability (11) comprise a satisfactory set of exogenous variables for use throughout the remainder of the chapter. The two purposes of this section have thus been accomplished. A usable set of exogenous variables has been identified for females, and the total effect of these variables on educational and occupational expectations have been estimated (see Table 3). We shall have occasion to refer to these data again in the discussion of the implications of the data for the hypotheses proposed in chapter II.[5]

Comparison of a Model Containing an Aggregate Perceived Significant Other Variable to a Model Containing Aggregate Objective Significant Other Variables

Recall that perceived significant other variables refer to significant other variables that are operationalized from student responses concerning significant others' attitudes or behavior, and objective significant other variables are based on responses collected from the significant others. The purpose of this section is to compare a version of the baseline model containing a commonly used perceived significant other variable to a version using objective measures. For convenience, the model containing the perceived measure will be referred to as the perceived model. and the model containing the objective measures will be designated the objective model.

Both the perceived and objective models contain the exogenous variables, SES (1) and mental ability (11), and the endogenous variable, academic performance (12), in addition to the significant other variables as part of the set of predictor variables used as estimators of educational and occupational expectation (34 and 35). The significant other variable in the perceived model is the aggregate, perceived significant other variable for education (28); for convenience, this variable will frequently be referred to by its mnemonic, PSOE. Two objective significant other variables are used, parental educational expectation for the youth (22) and parental occupational expectation for youth (25). To maintain reasonable comparability between the perceived and objective models, the educational expectation of parents for the child (22) is the only significant other variable used in the objective model when students' educational expectation (34) is the dependent variable, and the occupational expectation of parents for the children (25) is the only significant other variable

variable used in the objective model when student's occupational expectation (35) is the dependent variable. Thus, the same number of variables estimating educational and occupational expectation (34 and 35) are included in the perceived and objective versions of the model.

Over the past several years Sewell and associates have produced numerous publications suggesting that significant other influence is an important part of the career planning process (e.g., Sewell, Haller, and Ohlendorf, 1970; Sewell and Hauser, 1975; and Woelfel and Haller, 1971). This research shows a substantial impact of the significant other variables on educational expectation of youth and somewhat lesser impact on occupational expectation. Most of this research, however, has been based on the Wisconsin data set collected in Wisconsin, first by Little and then followed up by Sewell. (For exceptions see Woelfel and Haller, 1971; and Otto, 1976). Recently, Wilson and Portes (1975) published an important paper based on a national data set that questioned the importance of significant other variables on educational plans and attainments. Other data sets generally support the position taken by Sewell and associates, especially when educational expectation and attainment are dependent variables (see, for examples, Williams, 1972; Picou and Carter, 1976; and Kerckhoff and Huff, 1974). The relationships between significant other variables and educational and occupational plans are not, however, uniformly as high as those reported from the Sewell data set (e.g., Rehberg and Hotchkiss, 1972; and Picou and Carter, 1976). But in all of the relatively few instances where objective measures of significant other variables and educational and occupational plans of White males are quite high (Woelfel and Haller, 1971; Kerckhoff and Huff, 1974; and Curry, et al., 1976). The comparison between the perceived and objective models therefore affords an unusual opportunity to help resolve the differences between the position of Sewell and associates and the conclusions offered by Wilson and Portes (see, also, Kerckhoff and Huff, 1974). The perceived measure used here, PSOE (28), is similar to the variable used by Wilson and Portes, and the objective measures closely match the objective measures used in previous research. Hence, if it turns out that the objective model more accurately estimates educational and occupational expectation than does the perceived model, then the data provide grounds for suggesting that Wilson and Portes' results may, in part, be due to their operational measures of the significant other variables.

A path diagram of the perceived model is presented in Figure 2. The lack of casual specification between educational and occupational expectation is deliberate and follows common practice. For a discussion of this issue see Curry and associates (1976, Chapter II).

Table 6 displays standardized-path-regression coefficients for each of the subsamples. The data for Black females do not reveal a very satisfactory explanation of educational and occupational expectation (34 and 35). The explained variance is low for educational expectation and even lower for occupatioinal expectation. Both of these indicators of career plans are less well explained for Black females than for Black males. However, the data also fail to support a model employing PSOE (28) for Black males. This is primarily due to the lack of significant dependence of PSOE on antecedent variables. PSOE has a stronger effect on educational expectation for the Black females than for the Black males, and it does not significantly affect occupational expectation for either Black females or males. Finally, as already noted in the reduced-form model, educational expectation for Black females appears less sensitive to socioeconomic origins (1) than is the case for males.

For all dependent variables except occupational expectation, White females and males demonstrate similar patterns of relationships and similar levels of explained variance. The reduction in direct effects of the exogenous variables on both educational and occupational plans (34 and 35) is primarily due to PSOE rather than academic performance (12). For White females, the indirect effect of both socioeconomic status (1) and mental ability (11) on educational and occupational expectation (34 and 35) operates through PSOE (28). Finally, the explained variance for occupational expectation of White females is only 36% as large as the coefficient of determination on the same variable for males.

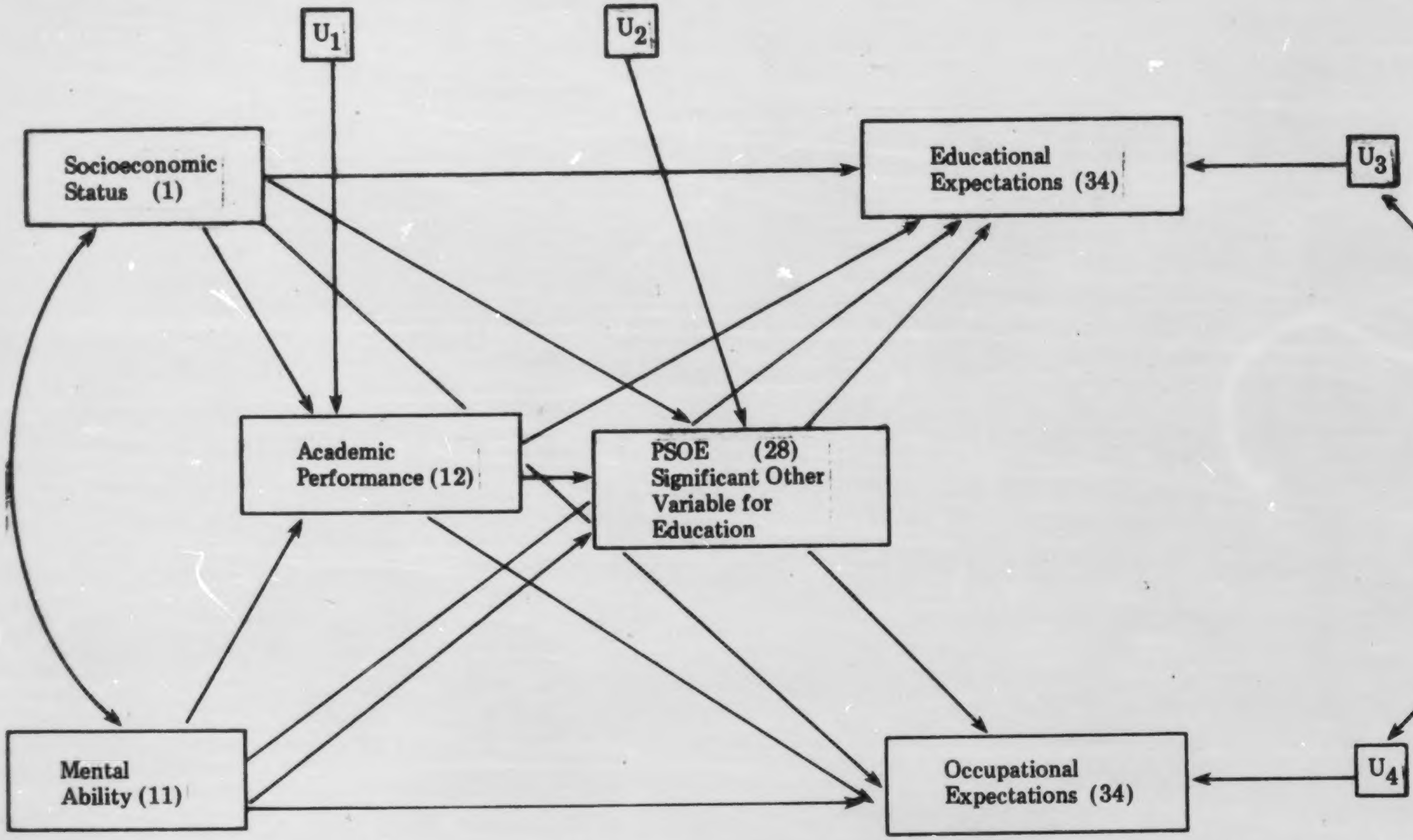
U1
U2
Socioeconomic Status (1)
Educational Expectations (34)
U3
Academic Performance (12)
PSOE (28) Significant Other Variable for Education
Mental Ability (11)
Occupational Expectations (34)
U4

Figure 2. A model of career decision making employing aggregate, perceived Significant Other Variable.

NOTE: The model represented in this figure reflects all effects estimated in the numerical calculations.

TABLE 6

STANDARDIZED-PATH-REGRESSION COEFFICIENTS EMPLOYING PSOE, FOR RACE-SEX SUBSAMPLES

Race-Sex Subsamples	Dependent Variables	Intercept	Independent Variables				R^2
			SES (1)	MA (11)	AP (12)	PSOE (28)	
Black Females (n=107)	AP (12)	.358*	.099	.431*			.150*
	PSOE (28)	.355	.111	.172	.157		.059
	EE (34)	.105	.087	–.031	.196*	.378*	.174*
	OE (35)	.263*	.127	.110	.065	.021	.047
Black Males (n=117)	AP (12)	–.315*	–.034	.384*			.162*
	PSOE (28)	–.015	.167	–.028	.087		.024
	EE (34)	.301*	.231*	.060	.272*	.264*	.228*
	OE (35)	.186	.318*	–.043	.349*	.044	.165*
White Females (n=119)	AP (12)	.159*	.081	.609*			.389*
	PSOE (28)	–.180*	.336*	.516*	–.112		.398*
	EE (34)	–.340	.114*	.067	.133	.424*	.461*
	OE (35)	.016	.0001	.055	.010	.296*	.135*
White Males (n=131)	AP (12)	.236*	.078	.494*			.242*
	PSOE (28)	–.435*	.240*	.362*	.110		.318*
	EE (34)	–.094	.141*	.215*	.119	.443*	.482*
	OE (35)	–.307*	.159*	.340*	–.111	.377*	.376*

*P (coefficient = 0) ≤ .05 (one-tail test)

The objective version of the model is shown in the path diagram in Figure 3. Specification of the model is discussed in Curry and associates (1976) and will therefore not be repeated here.

Table 7 displays standardized-path-regression coefficients for the model shown in Figure 3. The most striking observation for Black females is the substantial increase in the explained variance of educational expectation (34) (compare Table 7 to Table 6). This result is almost exclusively due to the effect of parents' educational expectation for their daughter (22). Also for Black females, parents' educational expectation for their daughter is significantly affected by academic performance (12) which, in turn, is significantly affected by mental ability (11). Thus an approximate "chain" of effects is established from mental ability to the educational expectation of the Black females. The R-square for occupational expectation (35) for Black females remains low, less than half that of Black males. The expectation of parents for their children is the strongest predictor of both educational and occupational expectation for the Black females, however. Occupational expectation of parents (25) is significantly affected by mental ability (11). As with educational expectation, occupational expectation for Black females is indirectly linked to mental ability. It is worth noting that significant other influence is more than twice as strong for educational expectation than it is for occupational expectation for both Black females and males. The explained variance in occupational expectation is weakly linked to the exogenous variables through the occupational expectations of parents for their progeny.

For the "objective" measurements of the significant other variables, the data for White females shows a moderate increase (compared to the perceived model) in the explained variance of educational expectation (34), but not as large as for White males. Educational expectation for White females is significantly affected by parental educational expectation (22) which is, in turn, significantly affected by socioeconomic status (1) and mental ability, (11). Thus, for White females, the effects of the exogenous variables are transmitted through the educational expectations held by parents for their daughters. In fact the indirect effect of the exogenous variables through parents' educational expectation (22) is greater than any direct effect on daughter's educational expectation (34) except that of the significant other variable.[6] (For White females, the indirect effect of SES on EE through EEP is .203; the indirect effect of MA is .175) In the sense of interpreting the effects of status and mental ability on career plans, this part of the model works slightly better for White females than for White males, even through the explained variance is less for females. (For White males, the indirect effect of SES on EE through EEP is .193, for White females—.203.) On the other hand, the explained variance of the occupational expectation (35) of White females is very weak—about 25% of that for White males. Further, no direct effect on occupational expectation is of sufficient magnitude to achieve significance for the White females.

A common finding for females is that academic performance appears to be less important in the formation of career plans than it is for males (e.g., Alexander and Eckland, 1975). In the perceived model, academic performance affects only educational expectation for Black females but affects both the educational and occupational plans (34 and 35) of the Black males. In the objective model, academic performance (12) again affects (indirectly) only the educational plans of Black females, while it indirectly affects the educational plans, and directly affects the occupational plans of the Black males. Among the White subsamples, academic performance has no appreciable direct effect on the career plans of either females or males when PSOE (28) is included in the equation. When parental expectations (22 and 25) are used, academic performance indirectly affects both educational and occupational expectation for White males but affects neither expectation variable for White females.

In conclusion, comparison of the perceived and objective models for educational expectation shows the objective model to be superior. First, for all four subgroups, the direct effect of parental

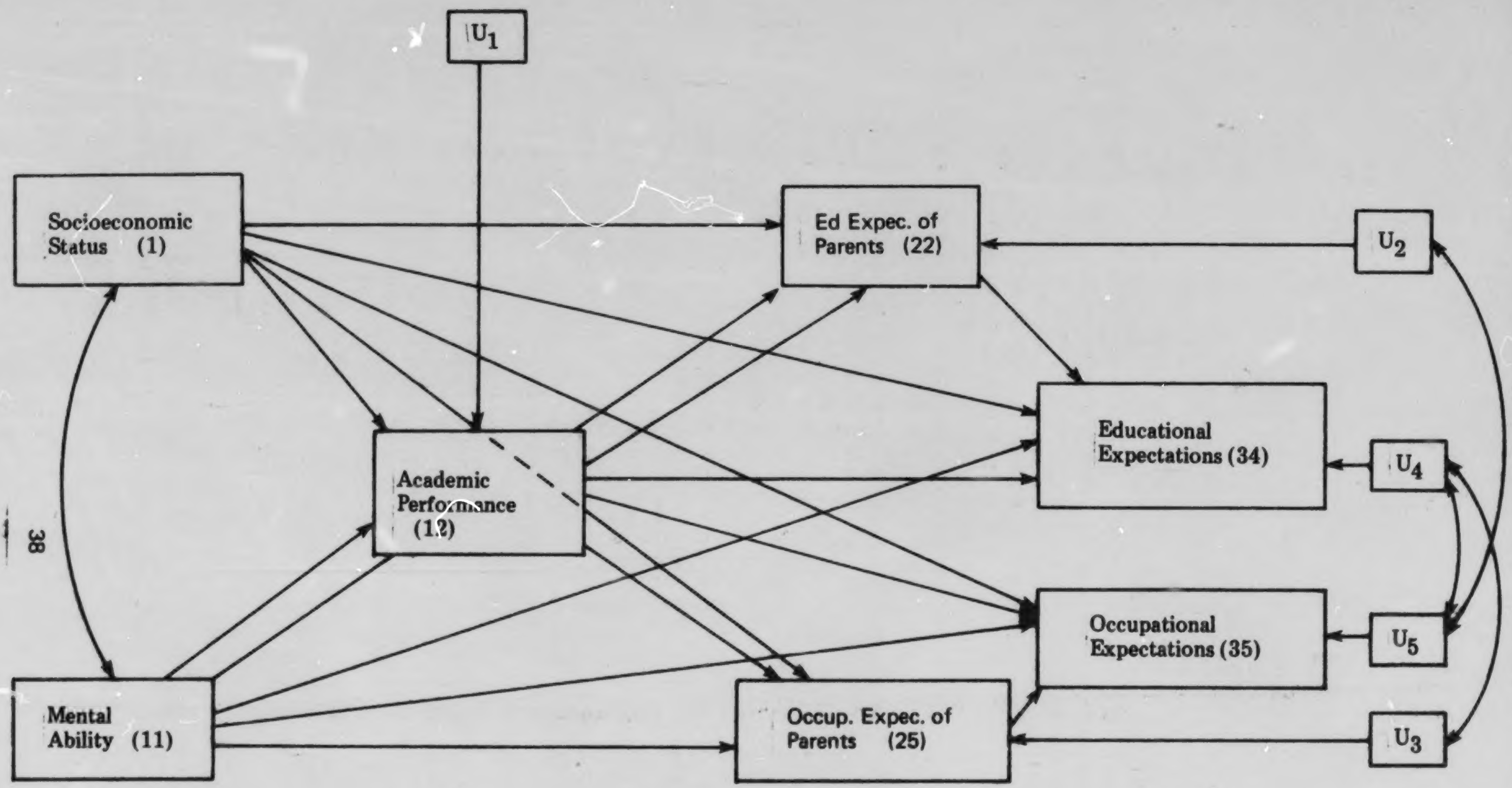
U1
Socioeconomic Status (1)
Ed Expec. of Parents (22)
U2
Educational Expectations (34)
U4
Academic Performance (12)
Occupational Expectations (35)
U5
Mental Ability (11)
Occup. Expec. of Parents (25)
U3

Figure 3. A model of career decision making employing objective parents' expectations for progeny to measure significant other influence.

TABLE 7

STANDARDIZED-PATH-REGRESSION COEFFICIENTS EMPLOYING AGGREGATE PARENTS' EXPECTATION FOR PROGENY, FOR RACE-SEX SUBSAMPLES

Race/Sex Subsamples	Dependent Variables	Intercept	Independent Variables					R²
			SES (1)	MA (11)	AP (12)	EEP (22)	OEP (25)	
Black Females (n=107)	AP (12)	.358*	.099	.431*				.150*
	EEP (22)	.821*	.106	.147	.280			.085*
	OEP (25)	.296*	.214*	.235*	.043			.093*
	EE (34)	−.221*	.031	−.049	.098	.561*		.437*
	OE (35)	.210*	.083	.065	.059		.205*	.092*
Black Males (n=117)	AP (12)	−.315*	−.034	.384*				.162*
	EEP (22)	−.109	.253*	.048	.334*			.307*
	OEP (25)	.272*	.243*	.248*	.281*			.219*
	EE (34)	.345*	.164	.031	.148	.440*		.235*
	OE (35)	.125	.272*	−.099	.291*		.222*	.204*
White Females (n=119)	AP (12)	.159*	.081	.609*				.389*
	EEP (22)	.037	.360*	.310*	.034			.388*
	OEP (25)	−.202*	−.011	.479*	.009			.265*
	EE (34)	−.437*	.053	.111	.066	.565*		.533*
	OE (35)	−.008	.101	.136	−.024		.148	.084*
White Males (n=131)	AP (12)	−.236*	.078	.494*				.242*
	EEP (22)	−.592*	.285*	.216*	.203*			.532*
	OEP (25)	−.224*	.170	.346*	.278*			.326*
	EE (34)	.291	−.031	.165*	−.030	.677*		.600*
	OE (35)	−.404*	.198	.372*	−.154		.302*	.325*

NOTE: Variables associated with omitted coefficients in the table were not included in the equation. For example, EEP was omitted from the equation for OE.

P (coefficient = 0) ⩽ .05 (one-tail test) educational expectation of their children (22) on the children's educational expectation (34) is greater than the corresponding effect using PSOE (28). In all cases the difference is substantial. Secondly, although a formal analysis of indirect effects was not undertaken in this section, inspection of the data in Tables 6 and 7 shows that the objective significant other variable (22) is more closely dependent on SES (1), mental ability (11) and academic performance (12) than is PSOE (28), except for White females. Hence, in most cases the objective measure does a better job of meditating the effects of the exogenous variables and academic performance on educational expectation (34) than does PSOE. Finally, except for White females, the multiple coefficients of determination are substantially larger when the objective measure is used. Wilson and Portes (1975) focused on educational attainment; the data presented here suggest that they might easily have found significant other influences to be of greater importance than they did had an objective measure of their significant other variable been available.

When occupational expectation (35) is the dependent variable, the objective model is not as clearly superior to the perceived model. The direct effects of the significant other variable (25) and the R-squares are increased for Blacks of both sexes, but corresponding increases are not registered for Whites. Use of the objective measure does, however, make the equation for occupational expectation for Blacks more closely approximate the corresponding equation for Whites.

Refinement of the Objective Model

In their analysis of data for the male samples, Curry, et al., (1976) suggested the possibility that occupational expectation is based, in part, on significant other educational expectation. This inference was drawn from the observed correlation between the residuals of educational expectation (34) and parental, occupational expectation (25). A preliminary test of such a model is provided by observing correlations among the residuals of the model shown in Figure 3; these correlations are displayed in Table 8.

TABLE 8

MATRIX OF CORRELATIONS AMONG RESIDUALS OF ENDOGENOUS AND DEPENDENT VARIABLES

Race/Sex Subsamples	Residual Variable	EEP (22)	OEP (25)	EE (34)	OE (35)
Black Males	EEP (22)	—	.453	*	.307
	OEP (25)	.595	—	.022	*
Black Females	EE (34)	*	.099	—	.457
	OE (35)	.115	*	.223	—
White Males	EEP (22)	—	.510	*	.301
	OEP (25)	.377	—	.129	*
White Females	EE (34)	*	−.077	—	.098
	OE (35)	.390	*	.107	—

NOTE: Correlations for males are displayed above the diagonal, and those for females are shown below the diagonal.

*Correlations between the residuals of these variables are assumed to be zero.

The data show one consistent pattern for all subsamples. The correlation between the residuals for parental, educational expectation (22) and the child's occupational expectation (35) is consistently stronger than the correlation between the residuals for parental, occupational expectation (25) and the child's educational expectation (34). For Black females, the difference is small, but the consistency of the direction of difference suggests that some insight might be gained from a path model regressing each career plan variable on both educational and occupational expectation of parents for their children. This strategy is followed in the remainder of this section.

The path analysis in this section differs from that presented in Figure 3 in two ways. The first difference is that father's and mother's educational and occupational expectation for their children are treated as separate variables, thus generating four significant other variables (variables 23, 24, 26, and 27).[7] The second is that each of the child's career-plan variables [educational (34) and occupational expectation (35)], are regressed on all four parental expectation variables (23, 24, 26, and 27). Table 9 presents results of the analysis by race-sex subsamples.

Parents' expectations have the strongest effect on career plans across all subsamples. However, the specific source varies considerably from one subsample to another. This suggests alternative modes of parental influence on career decision-making by race-sex categories.

Black females base educational and occupational expectation (34 and 35) primarily on the parental educational and occupational expectation (23, 24, and 26, 27), respectively, while Black males base both educational and occupational expectation primarily on the educational expectation held for them by parents (23 and 24). Among the remaining variables, academic performance (12) has a direct, significant effect on educational expectation for Black females, only. No plausible theoretical explanation can be offered why this effect failed to achieve statistical significance when parents' expectations were aggregated (see Table 7).

The pattern of effects on parents' expectations among Black females stands in marked contrast to the pattern for Black males. Among females, only one of the antecedent variables [SES (1), MA (11), and AP (12)] significantly affects any single, parental expectation variable. Among Black males, on the other hand, socioeconomic status (1) and academic performance (12) both significantly affect all four parental, expectation variables. Further, mental ability (11) significantly affects two of the parental expectation variables among Black females while significantly affecting only one parental, expectation variable among Black males. For Black females, mental ability affects parental expectations more consistently than does academic performance, whereas the reverse is true for Black males.

The patterns of effects on educational and occupational expectation for the White samples differ from the patterns observed for Blacks. Educational expectation for both White females and males are primarily influenced by educational expectations held for them by both father and mother. White females are also primarily influenced by mother's and father's educational expectation in setting levels of occupational expectation. But occupational expectation for White males is primarily influenced (among the parent expectation variables) by mother's educational and occupational expectation. Significant, direct effects on educational and occupational expectation for White females are associated only with parent expectation variables. Among White males, mental ability demonstrates significant direct effects on educational and occupational expectation, and academic performance demonstrates a significant, negative, direct effect on occupational expectation. The latter finding does not readily yield to theoretical interpretation.

Parents' expectations for White females and males are affected in a similar way by the mental ability of the child. However, socioeconomic status (1) and academic performance (12) are generally

TABLE 9

STANDARDIZED-PATH-REGRESSION COEFFICIENTS FOR RACE-SEX SUBSAMPLES WITH PARENTS EXPECTATIONS DISAGGREGATED AND CROSSED

Race/Sex Subsamples	Dependent Variables	Intercept	Independent Variables							R^2
			SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	
Black Females (n=107)	AP (12)	.358*	.099	.431*						.150*
	EEF (23)	.994*	.055	.296*	.041					.061
	EEM (24)	.761*	.164	.096	.254*					.083*
	OEF (26)	.229*	.139	.358*	.024					.123*
	OEM (27)	.295*	.203*	.139	.063					.066
	EE (34)	–.348*	.017	–.082	.165*	.365*	.284*	–.094	.099	.490*
	OE (35)	.094	.096	–.005	.065	.156	–.033	.214*	–.009	.162*
Black Males (n=117)	AP (12)	–.315*	–.034	.384*						.162*
	EEF (23)	–.076	.222*	.054	.291*					.219*
	EEM (24)	–.118	.235*	.079	.339*					.314*
	OEF (26)	.324*	.229*	.174	.286*					.153*
	OEM (27)	.166	.211*	.224*	.261*					.185*
	EE (34)	.369*	.162	.013	.140	.281*	.232	–.145	.139	.279*
	OE (35)	.253*	.174	–.108	.138	.023	.566*	–.064	.131	.326*
White Females (n=119)	AP (12)	.159*	.081	.609*						.389*
	EEF (23)	–.086	.433*	.272*	.074					.434*
	EEM (24)	.140	.281*	.332*	–.014					.250*
	OEF (26)	–.246*	–.050	.355*	.121					.182*
	OEM (27)	–.136	.026	.487*	–.050					.243*
	EE (34)	–.443*	.078	.047	.086	.140*	.411*	.007	.128	.572*
	OE (35)	–.054	–.144	.049	–.029	.425*	.178*	–.158	.081	.260*
White Males (n=131)	AP (12)	–.236	.078	.494*						.242*
	EEF (23)	–.505*	.270*	.188*	.140*					.376*
	EEM (24)	–.546*	.252*	.214*	.199*					.446*
	OEF (26)	–.198*	.170*	.331*	.125					.229*
	OEM (27)	–.192*	.131	.300*	.329*					.310*
	EE (34)	.238*	–.018	.139*	–.032	.390*	.549*	.056	.091	.615*
	OE (35)	–.060	.053	.292*	–.257*	.180	.615*	–.058	.172*	.429*

P (coefficient = 0) ⩽ (one-tail test)

more potent predictors of parents' expectations for White males than for White females. The pattern of effects of socioeconomic status (1) and mental ability (11) on academic performance of White females is similar to the pattern for White males.

The model discussed immediately above demonstrates the greatest explained variance in the ultimate dependent variables across all four subsamples of the models analyzed in this chapter. This is particularly true of the increased R-square for occupational expectation in each of the subsamples.[8] Consequently, it appears worthwhile to analyze the indirect effects on educational and occupational plans. Table 10 presents the indirect effects on career plans for Black females and males.

TABLE 10

INDIRECT EFFECTS OF EXOGENOUS AND ENDOGENOUS VARIABLES ON ULTIMATE DEPENDENT VARIABLES FOR BLACK SUBSAMPLES

Source of Causal Effect	Female		Male	
	EE (34)	OE (35)	EE (34)	OE (35)
SES (1) total effect	.116	.134	.265	.314
through:				
AP	.016	.006	−.005	−.007
PE*	.074	.031	.113	.151
AP and PE	.009	.0003	−.005	−.005
MA (11) total	.114	.143	.166	.092
through:				
AP	.071	.028	.054	.053
PE*	.116	.119	.039	.064
AP and PE	.039	.001	.060	.083
AP (12) total	.256	.068	.294	.353
through:				
PE*	.091	.003	.155	.215

NOTES: 1. This analysis presents the indirect effects operating through parents expectations *en toto.* This focuses attention on the total reduction in other effects due to significant other influence.

2. Calculation of indirect effects was carried out with standardized-path-regression coefficients.

*The notation "PE" indicates all significant other variables combined—EEF (23), EEM (24), OEF (26), and OEM (27). The indirect effects reported in the table are the sums of one-step indirect effects operating through these four variables.

For Black females the largest single source of indirect effect of both socioeconomic status (1) and mental ability (22) on educational and occupational expectation (34 and 35) is through parents' expectations (23, 24, and 26, 28). For Black males, the indirect effect of socioeconomic status on educational and occupational expectation is transmitted primarily through parents' expectations but this is not true for mental ability. Among Black females the proportion of the total causal effect of mental ability transmitted indirectly to educational and occupational expectation is greater than the proportion of the total causal effect of socioeconomic status transmitted indirectly to the same dependent variables. When attention is turned to the indirect effects of academic performance, Table 10 reveals that its effect is primarily direct for Black females. On the other hand, the greatest part of the total causal effect of academic performance is transmitted by parents' expectations for Black males. When the sum of the indirect effects transmitted by parents' expectation variables alone are compared to the sum of the absolute values of all other indirect effects, the former are at least twice as large as the latter in every column of Table 10. This, combined with analysis of direct effects in table 9 emphasizes the importance of parents' expectations for the formation of educational and occupational expectation among Blacks of both sexes.

Table 11 presents the analysis of indirect effects for Whites. For White females and males, the greatest single source of indirect effect of socioeconomic status (1) and mental ability (11) on educational and occupational expectation (34 and 35) is transmitted by parents' expectations (23, 24, and

TABLE 11

INDIRECT STANDARDIZED-PATH-REGRESSION EFFECTS OF EXOGENOUS AND ENDOGENOUS VARIABLES ON ULTIMATE DEPENDENT VARIABLES FOR WHITE SUBSAMPLES

Source of Causal Effect	Female		Male	
	EE (34)	OE (35)	EE (34)	OE (35)
SES (1) total	.264	.098	.260	.244
through:				
AP	.007	−.002	−.003	−.021
PE*	.179	.244	.278	.197
AP and PE	−.0001	.0005	.016	.015
MA (11) total	.338	.193	.459	.442
through:				
AP	.053	−.018	.003	−.126
PE*	.239	.144	.320	.184
AP and PE	−.001	.004	.099	.092
AP (12) total	.085	−.023	.168	−.070
through:				
PE*	−.001	.006	.200	.187

* This analysis employs the convention of presenting the indirect effects operating through parents expectations *en toto*. This focuses attention on the total reduction in other effects due to significant other influences.

*The notation "PE" indicates all significant other variables combined—EEF (23), EEM (24), OEE (26), and OEM (27). The indirect effects reported in the table are the sums of one-step indirect effects operating through these four variables.

and 26, 27). In contrast, the indirect effect of academic performance (12) on educational and occupational expectation for White females is practically nonexistent while they are moderate for White males. When the sum of the indirect effects transmitted through parents' expectations alone are compared to the sum of the absolute values of all other indirect effects, the former are at least twice as large as the latter for both educational and occupational expectation for Whites of both sexes.

In conclusion, the findings regarding both direct and indirect effects tend to confirm the importance of significant other influence in the career planning of students.

Implications for the Hypotheses in Chapter II

The data reported in this chapter are germane to the first eight hypotheses proposed in Chapter II. Since the last model reported in this chapter is generally superior to the other models, the hypotheses are evaluated against the last model; for convenience, it will be termed the expanded, objective model. When the effects of the exogenous variables and academic performance enter into the evaluations, their total effects rather than direct effects are considered. This is done because the total effects are the sum of direct and indirect effects, and effects are no less real because they are indirect. On the ohter hand, since there are no variables intervening between the significant other variables and educational and occupational expectation, direct effects of the significant other variables are used.

The expanded, objective model contains four significant other variables—father's educational expectation of his child (23), mother's educational expectation of her child (24), father's occupational expectation of his child (26), and mother's occupational expectation of her child (27). Since none of the eight hypotheses contain comparisons between the four significant other variables, and to avoid undue complexity, the average of the effects of these four variables is used as the bases for evaluating the hypotheses. This average can be regarded as the amount of "change" in the dependent variable (educational or occupational expectation) if all four significant other variables were increased by one-fourth of a unit while the other independent variables remained constant;[9] hence, its interpretative value surpasses the convenience of an *ad hoc* summary measure.

The needed summary data for evaluating the hypotheses concerning effects on occupational expectation are compiled in Table 12. Comparing columns one and two of the table, one sees that, for Blacks, hypothesis one tends to be supported; the effects of all variables except mental ability are smaller for Black females than for Black males. On the other hand, the average effects of the significant other variables are not greater for Black females than for Black males as stated in hypothesis four. In fact the average of effects of significant other variables on occupational expectation for Black males is just double the average for Black females; hence, hypothesis four is clearly disconfirmed for Blacks. Quite similar results are observed for occupational expectation for Whites, but for Whites the effects of all the independent variables on occupational expectation are smaller (in absolute magnitude) for females than for males, thus supporting hypothesis one. Hypothesis four is clearly refuted for Whites also, since the average effects of significant other variables on occupational expectation is approximately 1.7 times as great for White males as it is for White females.

The data relevant to the hypotheses for educational expectation are displayed in Table 13. For Blacks, the effects of all the variables except the significant other variables are smaller for females than for males, thus lending partial support to hypothesis two . The average effects of significant other variables is somewhat greater for Black females than for Black males; this observation supports hypothesis three, but the difference is small, so the evidence is not very strong. For Whites,

TABLE 12

SUMMARY OF EFFECTS ON OCCUPATIONAL EXPECTATION (35)

Independent Variable	Subgroup			
	Black Females	Black Males	White Females	White Males
SES (1) (total effect)	.134	.314	.098	.244
MA (11) (total effect)	.143	.092	.193	.442
AP (12) (total effect)	.068	.353	–.023	–.070
Significant Other Variables [average of effects of EEF (23), EEM (24), OEF (26), and OEM (27)	.082	.164	.132	.227

TABLE 13

SUMMARY OF EFFECTS ON EDUCATIONAL EXPECTATION (34)

Independent Variable	Subgroup			
	Black Females	Black Males	White Females	White Males
SES (1) (total effect)	.116	.265	.264	.260
MA (1) (total effect)	.114	.166	.338	.459
AP (1) (total effect)	.256	.294	.085	.168
Significant Other Variables [average of effects of EEF (23), EEM (24), OEF (26), and OEM (27)]	.164	.127	.172	.272

the effects of all variables except SES on educational expectation are smaller for females, and the effects of SES are approximately equal across sexes. Hence, for Whites, hypothesis two is supported and hypothesis three is not.

In summary, reasonably good support for hypotheses one and two has been observed. On the other hand, hypotheses three and four received scant support in the data.

The second four hypotheses concern the impact of being Black and female. Inspection of Tables 12 and 13 reveals that none of these hypotheses is supported. The effects of all independent variables for Black females do not exceed the corresponding effects for White females, whether educational or occupational expectation is the dependent variable. Rather, the pattern of differences is mixed. Thus, hypotheses five and six are not supported. Neither do the average effects of significant other variables for Black females exceed those effects for other subgroups, as stated in hypotheses seven and eight. The only case for which the hypothesized difference occurs is the comparison between Black females and Black males when educational expectation is the dependent variable.

Review of Findings

Several observations in this chapter are noteworthy:

1. Of the predictor variables considered, significant other variables clearly dominate the educational and occupational plans (34 and 35) of all subsamples (Black females, Black males, White females, and White males). Significant other variables also provide moderately good interpretations of the total effects of parental status (1), mental ability (11), and academic performance (12) on educational and occupational expectation, although the pattern of indirect effects is somewhat uneven across the subsamples.

2. The significant other variables generated more accurate estimates of educational and occupational expectation (34 and 35) when the significant other variables were based on responses elicited from significant others rather than from students, but this observation was clearer when educational expectation was the dependent variable than when occupational expectation was the dependent variable.

3. After fairly extensive exploratory analyses, it was concluded that mental ability (11) and a composite indicator of parental status (1) served as an adequate set of exogenous variables when the intent of the study is to focus on significant other influence.

4. The baseline model fits White males better than any other subgroup.

5. Occupational expectation is less accurately estimated than educational expectation for all groups except Black males; however, inclusion of parental, educational expectations (23 and 24) for their children in the equation for which occupational expectation is the dependent variable substantially increases the predictability of occupational expectation. The latter observation holds for all four subgroups. The R-square values when educational expectation is the dependent variable equal or exceed .49 for all subgroups except Black males.

6. Tests of the first eight hypotheses in chapter II indicate support for the hypotheses that educational and occupational expectation are less accurately predicted for females than for males, but fail to support the hypotheses that females are more dependent on significant others in forming career plans than are males.

Item six leads directly to the analyses reported in the next chapter. Variables such as home-career expectation are introduced into the equations to see whether variables that the literature suggests affect the career plans of females improve the predictability of those plans.

7. The data do not support the hypotheses regarding Black females. Educational and occupational expectation were not more accurately predicted for Black females than for White females, and significant other variables were not associated with stronger effects on educational and occupational expectation for Black females than for other subsamples.

FOOTNOTES

[1] It should be emphasized that the evidence for these hypotheses in the literature is not very strong.

[2] The reader is reminded that in standardized path regression analysis, the grand mean of the pooled subsamples will be zero for all variables. Further, the unit of measure for each variable will be the standard deviation of the variable for the pooled subsamples.

[3] Analyses of the data for males are not presented in this section. However, similar analyses were conducted by Curry, et al., (1976) for the males. The results indicated no appreciable advantage in treating socioeconomic status in disaggregated form.

[4] To see if any of these possible consequences occur, the last model reported in this chapter (see Table 9) was estimated twice (data not included in this report), once using aggregate SES (1) and once using disaggregate SES (variables 2, 3, 5). In brief, it was found that the R-squares, direct effects, and indirect effects were not substantially different for the two forms of the model.

[5] In additional statistical analyses (not reported), mothers' occupational status, mother's participation in the work force, number of brothers, and number of sisters, were added to the set of exogenous variables. These additional variables added little insight to understanding of the system of variables under study. Few of the regression coefficients associated with the new variables were significant, and in some instances the direction of the relationships were counter to expectation. In addition, only small increments in the R-square values were observed. Consequently, none of the additional background variables have been included in any of the equations reported in the text.

[6] The reader not familiar with the term "indirect causal effect" is referred to Finney (1972) or Alwain and Hauser (1975).

[7] The chapter does not report a model employing perceived significant other variables in disaggreate form. This is predicated on two facts. The first is that the model employing the parent's objective expectation is clearly superior . . . both in terms of explained variance and intervening effects. The second is that such a model was estimated with the result of neither appreciably increasing the explained variance of the dependent variables nor yielding a meaningful pattern of intervening effects. For example, the largest increase in explained variance for any subsample was .027 which is not statistically significant.

[8] The fact that the explained variance of occupational expectation for Black males is greater than that of educational expectation cannot be unambiguously interpreted. When nonparental, significant others are included in the model the explained variance of educational expectation for Black males is increased to nearly that observed for females. (Curry, et al., 1976, Chapter V). Since nonparental, significant others were not interviewed for the females, this variable could not be included in the models analyzed herein. However, if the inclusion of nonparental, significant others for Black females were to increase the explained variance of educational expectation by approximately the same magnitude as it does for males, then the observed difference would be of marked substantive significance.

[9] This point can be readily understood from an example containing two independent variables that are changed by one-half unit and one independent variable that remains constant. Let

$$y = a + b_1x_1 + b_2x_2 + b_3x_3$$

where y is the dependent variable, the x's are independent variables, and a and the b's are constants. Suppose the first two x's change by one-half unit while the third x remains fixed, then the change in y is

$$\Delta y = [a + b_1(x_1 + \tfrac{1}{2}) + b_2(x_2 + \tfrac{1}{2}) + b_3x_3] - [a + b_1x_1 + b_2x_2 + b_3x_3] = \tfrac{1}{2}(b_1 + b_2)$$

Hence, the effect of changing x_1 and x_2 each by one-half unit while x_3 is constant is the average of the coefficients for X_1 and x_2,

CHAPTER V

HOME-CAREER EXPECTATION OF YOUNG WOMEN AND THE DEVELOPMENT OF EDUCATIONAL AND OCCUPATIONAL EXPECTATION

Introduction

The purpose of this chapter is to investigate the importance of home-related roles in the career planning of females.[1] The term home-career expectation is used throughout the analysis to designate a specific content; it refers to an expectation on the part of the respondent regarding the relative emphasis to be placed on home-related roles versus occupational roles.[2] Three variables referring to home-career expectation play a central part in the analyses: (a) the daughter's home-career expectation for herself (20), mother's home-career expectation for her daughter (17), and father's home-career expectation for his daughter (14). High values on all three of these variables indicate emphasis on occupational roles.

Several hypotheses concerning home-career expectation were drawn from the literature reviewed in Chapter II (hypotheses nine through 13). Data for testing each hypotheses are contained in specific sections of the chapter. The second section explores exogenous variables that may affect the student's home-career expectation (20). These data are not directly relevant to any of the hypotheses, but their analysis is an important preliminary step for subsequent analyses. In section three the parent's home-career expectations for their daughters are added to the exogenous variables to form a set of independent variables predicting the student's home-career expectation. These data provide empirical tests of hypothesis 13 which indicates that parental, home-career expectation for daughter affects the daughter's home-career expectation. In section four, the home-career-expectation variables (20, 17, and 14) are entered as independent variables in a linear path model in which educational and occupational expectation are the ultimate dependent variables. Since hypotheses nine and ten indicate that home-career expectation affects the educational and occupational expectation of females, the data in this section yield empirical tests of hypotheses nine and ten. Hypotheses 11 and 12 postulate that home-career expectation and the other independent variables in the baseline model exhibit a statistical interaction in their effects on educational and occupational expectation. Specifically, it was hypothesized that females oriented toward occupational careers match the status attainment process of males more closely than do all females combined. Section five tests these hypotheses by comparing the baseline model for males to (a) the baseline model for females who score high on home-career expectation, and (b) the baseline model for all females combined. The final section summarizes and interprets the findings in the preceeding sections.

Most of the analyses in this chapter are restricted to the samples of females. When no sex comparisons are reported, the two schools that were not included in the male samples are included in the calculations. The slight discrepancies between data reported in this chapter and data reported in the last chapter are due to the small difference in the samples. Sex comparisons are, however, reported for the tests of hypotheses 11 and 12. In this instance the two schools that were sampled for females but not for males are omitted from the calculations. It probably would present less confusion to have maintained the same sample throughout, but it was judged that the twenty observations from the two schools from which males were not sampled add enough stability to the regression estimates to merit their inclusion where feasible.

Exogenous Variables for Home-Career Expectation

This section contains exploratory data analyses intended to identify a set of exogenous variables that are related to home-career expectation (20). The exogenous variables to be included in the calculations are:

1. Father's occupational status [FO (2)]
2. Father's education [FE (3)]
3. Mother's education [ME (5)]
4. Mother's occupational status [MO (4)]
5. Mother's work status [MWS (6)]
6. Number of brothers [#BRO (8)]
7. Number of sisters [#SIS (9)]
8. Family type [FT (10)]
9. Mental ability [MA (11)]

The first three variables are traditionally included in status attainment models; their average comprises the SES index used in much of this report. Also, Gysbers and associates (1968) presented evidence that home-career expectation is positively associated with parental education. Mental ability is also included in most status attainment models. Mother's occupation and mother's work status were suggested by the review of literature to be especially important to female's decisions concerning home-related goals (Peterson, 1958; Smith, 1968; and Tangri, 1972). Sewell's article (1971) suggests that number of siglings, particularly the number of brothers, tends to attenuate the chance that females will attend college. If the number of brothers and sisters is negatively related to college plans, then it is also likely to be negatively related to home-career expectation; hence, the number of brothers and the number of sisters are included as distinct variables. Finally, family type is included in order to assess the degree to which the large number of nonintact families (see Appendix A) has produced systematic bias into the distribution of home-career expectation.

The regression statistics are reported in Table 14. For White girls, mothers' education is the only variable associated with a coefficient large enough to be statistically signficiant. For Blacks, father's education is associated with the largest absolute value of any coefficient, but it is not statistically significant, and the sign of the coefficient is negative, counter to hypothesis. Mother's work status for Black females is also associated with a negative coefficient, small to moderate in magnitude, even though one would expect it to be positive.

Home-career expectations of either Black or White females cannot be accurately estimated using the variables reported here as indicated by the nonsignificant R-squares. This fact, combined with the lack of consistently strong and clearly interpretable effects of the independent variables suggests that subsequent models are best evaluated employing the aggregate measure of socioeconomic status (1) and mental ability (11). This choice promotes parsimony, greater power of statistical tests, and greater comparability to the models analyzed in the previous chapter.

TABLE 14

EXPANDED EXOGENOUS VARIABLES SET FOR ESTIMATING HOME-CAREER EXPECTATION OF BLACK AND WHITE FEMALES

Intercept and Independent Variables	Race/Sex and Dependent Variables Black Females H–CE (20)	White Females H–CE (20)
Intercept	.338*	– .279
FO (2)	.033	.072
FE (3)	– .179	– .125
ME (5)	.051	.215*
MO (4)	– .099	– .027
MWS (6)	– .141	.081
#BRO (8)	.139	.023
#SIS (9)	.026	– .118
FT (10)	– .014	– .112
MA (11)	– .037	.109
R^2	.084	.100
F	1.10378	1.44009

*P (coefficient = 0) $<$ .05 (one-tail test)

Exploration of the Process of Forming Home-Career Expectation

In this section, a simple path model with home-career expectation as the chief dependent variable is presented. The exogenous variables are parental status (2) and mental ability (11), and the endogenous variables used as predictors of home-career expectation are academic performance (12), mother's home-career expectation for her daughter (17), and father's home-career expectation for his daughter (14). It is assumed that academic performance is affected by the exogenous variables, father's and mother's home-career expectation are affected by academic performance and the exogenous variables, and that the daugher's home-career expectation may be affected by all the other variables. This causal specification follows, by anology, the specification of the baseline model. In the baseline model (see Figure 1) the significant other variables are also viewed as partial consequences of the exogenous variables and academic performance, and the significant other variables are hypothesized to directly affect the career planning variables. It should be noted, however, that the causal specification is subject to debate for the model of home-career plans until longitudinal data can be marshalled to test the assumptions empirically—just as is the case for the baseline model.[3]

Data for the model containing home-career expectation as the dependent variable are displayed in Table 15. These data do not manifest the same clear tendency toward an intervening variable model that has been observed for the process of developing educational and occupational plans for boys. An intervening variable model is characterized by three conditions; (a) the background variable(s) must exercise a substantial impact on intervening variables; (b) intervening variable(s) must be associated with sizable effects on dependent variables; and, (c) the direct path from the background variables to dependent variable(s) must be small. These features do not characterize the data in Table 15. Mother's home-career expectation for her daughter shows a moderate impact on the daughter's home-career expectation for Whites, and a slight effect for Blacks. For neither race are the parental home-career expectations accurately estimated by background variables—only the coefficient indexing the effect of status on father's home-career expectation for his daughter among Whites is large enough to be statistically significant. In addition, the accuracy of estimation as indexed by R-square values is uniformly small, in no equation approaching the magnitudes observed for models of educational and, to some extent, occupational expectation of either boys or girls.

It is possible that a general attitude toward female roles intervenes between background variables and parental, home-career expectation for their daughters (14 and 17), and between the exogenous variables and daughters' own home-career expectation (20). The measure of general attitude used here is comprised of a five-item scale (21). Each item presents a statement such as "A woman's place is in the home" and requests an indication of agreement ranging in five levels from strongly agree to strongly disagree (see Appendix B). A high score indicates preference for the career role for women. While this general attitude may, in fact, be intervening, there is neither strong theory nor convincing data to indicate where. Consequently, home-career expectation is regressed on these three new variables [FH–CG (15), MH–CG (18), and H–CG (21)] and those included in Table 15 without specifying the causal ordering of the general attitude variables in a path analysis. The data for the regressions are presented in Table 16.

The picture has not been clarified very much by the addition of the general attitude measures. For Blacks, adding three variables to the equation for daughter's home-career expectation (20) has reduced the coefficient associated with mother's home-career expectation (17) below the level required for statistical significance. For Whites, daughter's general attitude (21) is associated with a small to moderate coefficient in the equation for daughter's home-career expectation, as hypothesized. Father's general attitude (15) is also associated with a moderate direct effect in this equation even though the frame of reference provided by the Wisconsin model would suggest that the general attitude of parents would operate indirectly, i.e., the partial coefficient for the general attitude should

TABLE 15

STANDARDIZED-PATH-REGRESSION COEFFICIENTS FOR HOME-CAREER EXPECTATION

Blacks
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	FH–CE (14)	MH–CE (17)	R^2
AP	(11)	.128	.453*				.166*
FH–CE	(14)	.040	.127	.069			.020
MH–CE	(17)	.030	– .047	.196*			.027
H–CE	(20)	– .172	– .139	.113	.120	.168*	.102*

Whites
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	FH–CE (14)	MH–CE (17)	R^2
AP	(11)	.052	.558*				.318*
FH–CE	(14)	.191*	– .002	– .152			.054
MH–CE	(17)	.097	.120	– .188			.033
H–CE	(20)	.082	.044	.054	.020	.310*	.115*

*P (coefficient = 0) $<$ .05 (one-tail test)

TABLE 16

REGRESSION COEFFICIENTS FOR HOME-CAREER EXPECTATION (DEPENDENT VARIABLE) INCLUDING MEASURES OF GENERAL ATTITUDE TOWARD THE FEMALE ROLE

Independent Variable	**Race/Sex Subsample DV = H–CE (20)**	
	Black Females 23	**White Females 23**
Socioeconomic status (1)	– .214*	.044
Mental ability (11)	– .267*	– .035
Academic performance (12)	.096	– .072
FH–CG (15)	.119	.252*
MH–CG (18)	– .006	.070
FH–CE (14)	.108	– .019
MH–CE (17)	.145	.264*
H–CG (21)	.143	.194*
R^2	.141	.225*

R^2 without H–CG	.102	.115
Difference	.039	.110

*P (coefficient = 0) $\leqslant$ .05 (one-tail test) be zero when the specific expectation is controlled. The R-square for this equation has nearly doubled when compared to the corresponding R-square when the general attitudes were omitted.

One of the anomalies in the data is that both family status (1) and daughter's mental ability (11) exhibit statistically significant (at $p \leq .01$ for a two-tailed test) negative coefficients in the equation for home-career expectation for Black females, but none of the home-career variables achieve statistical significance for the Black females.

Although the coefficients of determination for daughter's home career expectation is increased by the inclusion of the general attitude variables, predictive accuracy remains small. Also, causal specification of these variables is difficult. Hence, the general attitude variables are omitted from the ensuing analysis.

Hypothesis 13 in Chapter II states that parental, home-career expectation for the daughter (14 and 17) positively affect the daughter's own home-career expectation (20). The data presented in this section lend only limited support to this hypothesis. In Table 15, mother's home-career expectation is associated with a statistically significant coefficient for both races, but the magnitude of the coefficient for Blacks is small. The situation is little changed by the introduction of the general sex-role attitudinal variables(15, 28, and 21) as reported in Table 16, although the path for mother's home-career expectation is reduced just enough to make it nonsignificant for Blacks.

Linear Model of the Effects of Home-Career Expectation on Educational and Occupational Expectation for Females

This section incorporates the three home-career variables (20, 17 and 14) into the baseline model of status attainment. The hypothesis is that educational and occupational expectation for females may be affected by the home-career variables. The new model is presented in Figure 4.

The causal ordering reflected in Figure 4 represents the authors' best judgment about the dominant direction of effects (see footnote 3). Parents' home-career expectations for their daughter (14 and 17) placed in the same "temporal space" as the remaining significant other variables. Home-career expectation of the daughter (20) is treated as a consequence of the significant other variables. Finally, the placement of daughter's home-career expectation as antecedent to educational and occupational expectation is consistent with the arguments presented in Chapter II (Tangri, 1972). The specific hypotheses reflected by this specification are that females who are more career oriented will expect to achieve more education and higher prestige occupations (hypotheses nine and ten). The data are presented in Table 17.

Inspection of these data reveals that home-career expectation of girls (20) and their parents (14 and 27) do not contribute very much to understanding the process of forming educational and occupational expectation (34 and 35)—at least in a linear path model. Home-career expectation is not, in general, associated with large paths leading into educational and occupational expectation. Only one of these paths is statistically significant, viz, the path from daughter's home-career expectation among Whites to occupational expectation. While daughter's home-career expectation is connected to mother's home-career expectation for her daughter, for both races, the exogenous variables are not very accurate estimators of parental, home-career expectation.

In summary, there is a moderately strong link from mother's home-career expectation for her daughter to daughter's home-career expectation for herself, but the link from daughter's home-career expectation

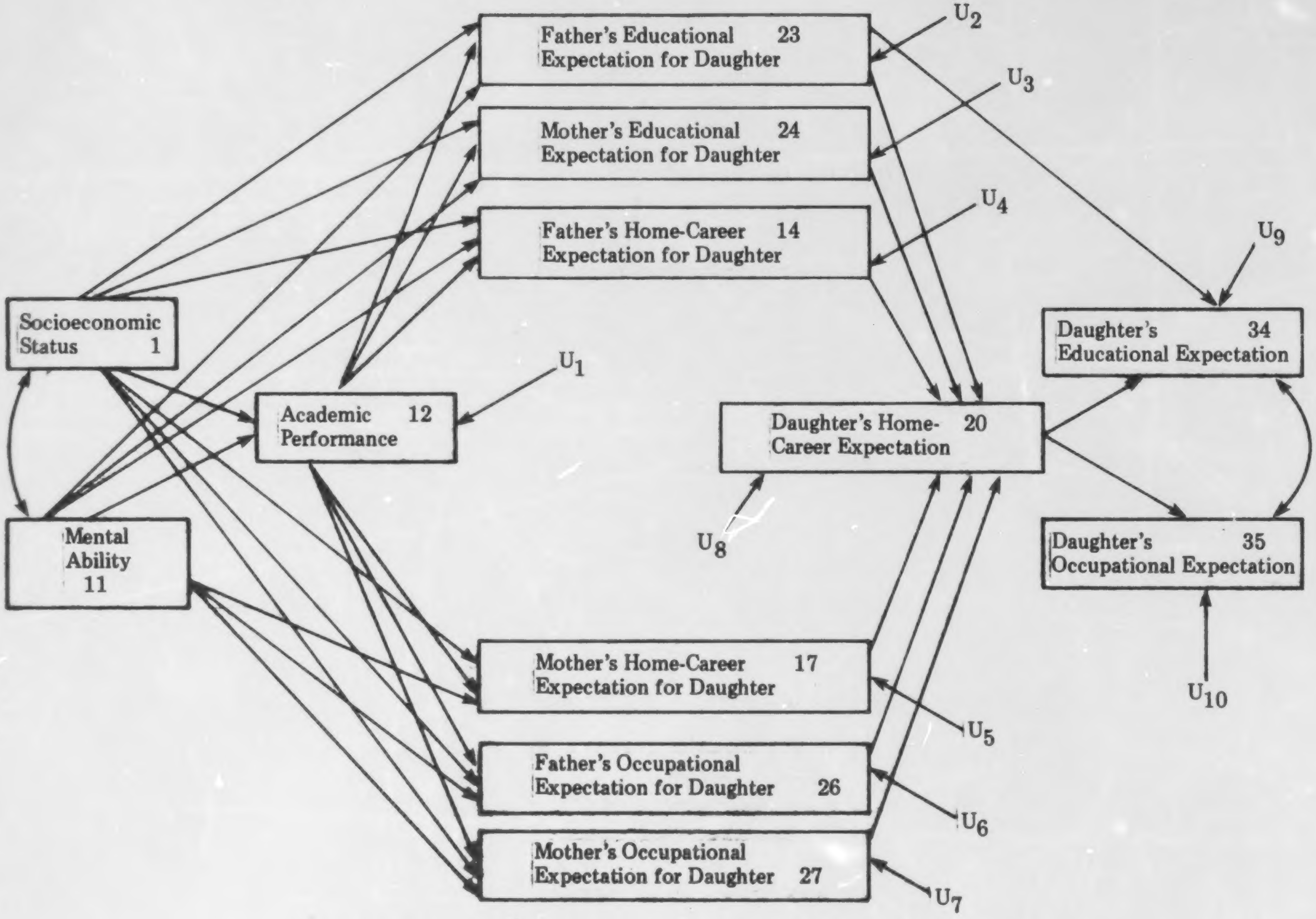

Figure 4. Path model of career decision making process including home-career variables.
NOTE: 1. Numerical estimation of the model includes all possible recursive paths.
2. Curved, double-headed arrows among the significant other variables are omitted to avoid cluttering the diagram.

TABLE 17

STANDARDIZED PATH-REGRESSION COEFFICIENTS—LINEAR MODEL OF EDUCATIONAL EXPECTATION, OCCUPATIONAL EXPECTATION AND HOME-CAREER EXPECTATION

Blacks
Independent Variables

Dependent Variables	SES (1)	MA (11)	AP (12)	FH–CE (14)	MH–CE (17)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	H–CE (20)	R^2
AP (12)	.128	.453*									.166*
FH–CE (14)	.040	.127	.069								.020
MH–CE (17)	.030	-.048	.196*								.028
EEF (23)	.138	.194	.105	.087	.222*						.128*
EEM (24)	.166	.105	.231*	.271*	.067						.185*
OEF (26)	.116	.297*	.032	.189*	-.037						.156*
OEM (27)	.169	.116	.044	.059	.129						.088
H–CE (20)	-.164	-.100	.103	.123	.173*	-.069	.096	-.118	-.006		.117
EE (34)	.015	-.136	.120	.000	.041	.358*	.203*	.030	.062	.046	.439*
OE (35)	.110	.001	.024	.053	-.081	.135	-.039	.260*	.042	.166*	.212*

Whites
Independent Variables

Dependent Variables	SES (1)	MA (11)	AP (12)	FH-CE (14)	MH-CE (17)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	H–CE (20)	R^2
AP (12)	.052	.558*									.318*
FH–CE (14)	.191*	.002	-.152								.054
MH–CE (17)	.097	.120	-.088								.033
EEF (23)	.425*	.249*	.091	-.029	.117						.427*
EEM (24)	.219*	.262*	.062	.110	.050						.220*
OEF (26)	-.053	.368*	.100	-.001	.037						.177*
OEM (27)	.011	.429*	.001	-.033	.067						.219*
H–CE (20)	.070	.025	.040	.026	.312*	.064	-.039	.115	-.067		.127
EE (34)	.078	.057	.077	-.010	.047	.121	.404*	-.003	.136	.089	.584*
OE (35)	-.163	.054	-.014	.175*	-.126	.428*	.138	-.180*	.141	.097	.312*

to her educational and occupational expectation is weak or nonexistent. Consequently, the data do not support a view that home-career expectations of girls and their parents play an important mediating role in the process of forming educational and occupational goals of girls. Hypotheses nine and ten are, therefore, not supported.

On the other hand, these data do lend further evidence in support of the view that significant others form an important aspect of the process of forming career goals. Whether a girl's educational expectation, occupational expectation or home-career expectation is the dependent variable, the corresponding expectation of one or both of the parents is associated with the largest path coefficient in the equation. It should be noted, however, that the R-square value for home-career expectations of girls and occupational expectations of girls is well below the R-square values observed in the models of occupational and educational expectations of boys. One is not led to question the importance of significant others in the formation of career expectations of girls, but representing the process as a linear additive path model may be less than satisfactory.

Interaction between Home-Career Expectation and Other Variables in the Baseline Model

This section presents data to test hypotheses 11 and 12. These two hypotheses state that females emphasizing the importance of occupational roles will follow a process of forming educational and occupational plans that is more similar to the process for males than is the case for all girls combined.[4] To test these hypotheses, home-career expectation (20) was divided as close to the median as possible, and the last model in chapter IV was calculated separately for the group scoring high on home-career expectation. Hypotheses 11 and 12 indicate that the path coefficients for this group should more closely approximate the coefficients for boys than do the path coefficients for all females combined. As in all the analyses, calculations were executed separately for Blacks and Whites.

Table 18 displays the needed data. Recall that the sample for these comparisons excludes about twenty observations of females drawn from the two schools that were not included in the sample of males.

The table spans two pages. The first page shows the indicated comparisons for Blacks, and the second page provides the same information for Whites. The comparisons can be made by comparing the top panel (model for the boys) to the bottom two panels. If the hypotheses are correct, the top panel should more closely approximate career oriented girls (second panel) than all girls combined (bottom panel). These data do not reveal any clear pattern. The career oriented girls (i.e., those above the median on home-career expectation) for both races show no closer approximation to boys than do all girls combined. In order to improve confidence in this observation, the average absolute difference between the coefficients for boys and those of career oriented girls, and between boys and girls irrespective of home-career expectations were calculated, equation-by-equation, and over all equations. These results are reported in Table 19. The average absolute differences in R-squares were also calculated and are reported in the table.

These data confirm the impressions gained from perusal of the data in table 18. The path coefficients for career oriented girls are no closer, on the average, to boys than are the coefficients for all girls combined. Indeed, for both races, the average difference over all equations is somewhat *larger* for career oriented girls than for all girls combined.[5] Hypotheses 11 and 12 refer specifically to the equations in which educational and occupational expectation are dependent variables. Observing the last two rows of Table 18, one sees the same pattern that occurs when results are averaged overall equations, hence, these data lend no support to hypotheses 11 and 12.

TABLE 18

COMPARISONS BETWEEN MALE AND FEMALE PATH MODELS OF EDUCATIONAL AND OCCUPATIONAL EXPECTATIONS BY RACE AND HOME-CAREER ORIENTATION

Black Male
N=117
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	R^2
AP	(11)	-.0338	.384*						.162*
EEF	(23)	.222*	.054	.291*					.219*
EEM	(24)	.235*	.079	.339*					.314*
OEF	(26)	.229*	.174	.286*					.153*
OEM	(27)	.211*	.224*	.261*					.185*
EE	(34)	.162	.013	.140	.281*	.232*	-.145	.139	.279*
OE	(35)	.174*	-.108	.138*	.023	.566*	-.064	.131	.326*

Black Female
Career
N=81
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	R^2
AP	(11)	.147	.412*						.143*
EEF	(23)	.256*	.521*	-.0371					.163*
EEM	(24)	.199	.172	.322*					.146*
OEF	(26)	.245*	.281*	-.0299					.109*
OEM	(27)	.261*	.144	.0507					.091
EE	(34)	.002	.091	.040	.174	.389*	.048	.034	.505*
OE	(35)	.022	-.063	.194	.314*	-.230	.344*	.081	.252*

Black Female
All
N=107
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	R^2
AP	(11)	.099	.431*						.150*
EEF	(23)	.055	.296*	.041					.061
EEM	(24)	.163	.096	.254*					.083*
OEF	(26)	.139	.359*	.025					.123*
OEM	(27)	.203*	.139	.063					.066
EE	(34)	.017	-.082	.165*	.365*	.284*	-.094	.099	.490*
OE	(35)	.096	-.005	.065	.156	-.033	.214*	-.009	.162*

Table 18 (continued)

White Male
N=131
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27	R^2
AP	(11)	.078	.494*						.242*
EEF	(23)	.270*	.188*	.140					.376*
EEM	(24)	.252*	.214*	.199*					.446*
OEF	(26)	.170*	.331*	.125					.229*
OEM	(27)	.131*	.300*	.329*					.310*
EE	(34)	-.018	.139*	-.032	.390*	.549*	.056	.091	.615*
OE	(35)	.053	.292*	-.257*	.180	.615*	-.058	.172*	.429*

White Female
Career
N=66
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	R^2
AP	(11)	.180*	.492*						.408*
EEF	(23)	.465*	.295*	.291					.455*
EEM	(24)	.290*	.288*	-.015					.273*
OEF	(26)	-.246*	.247*	.321*					.250*
OEM	(27)	.064	.506*	-.098					.276*
EE	(34)	.120	-.095	.209	.086	.477*	-.053	.170	.634*
OE	(35)	-.104	-.089	.063	.394*	.188	-.080	-.023	.234*

White Female
All
N=119
Independent Variables

Dependent Variables		SES (1)	MA (11)	AP (12)	EEF (23)	EEM (24)	OEF (26)	OEM (27)	R^2
AP	(11)	.081	.609*						.390*
EEF	(23)	.433*	.272*	.074					.434*
EEM	(24)	.281*	.332*	-.014					.250*
OEF	(26)	-.050	.335*	.121					.182*
OEM	(27)	.026	.487*	-.050					.243*
EE	(34)	.078	.047	.086	.140*	.411*	.007	.128	.572*
OE	(35)	-.144	.049	-.029	.425*	.178*	-.158	.081	.260*

*P (coefficient = 0) ≤ .05 (one-tail test).

TABLE 19

AVERAGES OF ABSOLUTE DIFFERENCES BETWEEN PATH COEFFICIENTS AND R-SQUARE VALUES FOR MALES AND FEMALES, BY RACE AND HOME-CAREER ORIENTATION

		Independent Variables			
Dependent Variable and Equation Number		All Black Females Compared to Black Males	Career Oriented Black Females Compared to Black Males	All White Females Compared to White Males	Career Oriented White Females Compared to White Males
AP	(11)	.090	.105	.039	.035
EEF	(23)	.22	.252	.104	.151
EEM	(24)	.058	.049	.094	.109
OEF	(26)	.179	.146	.026	.232
OEM	(27)	.097	.113	.224	.211
EE	(34)	.070	.115	.111	.168
OE	(35)	.201	.257	.220	.244
Averages of Absolute Values Over All Equations	Path Coefficients	.134	.161	.134	.181
	R-Squares	.132	.097	.098	.104

It should be pointed out that the available data do not permit an optimum test of hypotheses. It would be preferable to isolate females indicating the highest category of home-career expectation, rather than treating all those above the median as a single group; the highest category of home-career expectation includes girls who indicate preference for an occupational career to the exclusion of the traditional homemaker role. Too few respondents checked the highest category, however, to permit separate analyses. Interaction hypotheses can sometimes be tested by the inclusion of non-linear (usually product) terms in the regression equations without as severe loss in degrees of freedom as occurs when samples are divided. It would be difficult, however, to write structural equations that faithfully reflect hypotheses 11 and 12. Products of independent variable are frequently used to express interaction hypotheses, but product terms do not form an accurate algebraic statement of hypotheses 11 and 12.

Summary and Conclusions

Several important observations are contained in the data reported in this chapter:

1. The home-career expectation for females is essentially uncorrelated with exogenous variables such as parental status measures, family size, mother's work status, and mental ability.

2. Limited support was observed for the hypothesis that daughter's home-career expectation is dependent on the home-career expectation held for her by her parents, but for both races only the mother's home-career expectation of her daughter had a significant impact; the coefficients associated with the father's home-career expectation were not statistically significant

3. No support was found for the hypotheses that educational and occupational expectation for females are dependent on home-career expectation.

4. No support was found for the hypotheses that females who tend to emphasize the importance of an occupational career over homemaking are more similar to males in the formation of educational and occupational expectation than are females in general.

5. Although the effect of significant other variables on home-career expectation was not observed to be as great as the effect of significant other variables on educational and occupational expectation, significant other variables were stronger predictors of home-career expectation than were any other variables; hence, it is concluded that the data lend further support to the view that significant other influence is an important part of career planning.

The general conclusion emerging from these details is that the normative emphasis on the importance of home-related roles for women does not play an important part in career planning of young women, but to avoid overgeneralizing this conclusion, it is important to specify the aspects of career planning to which the present analysis applies and to consider possible reasons for the observed results.

The most obvious delimination of the analysis is that occupations were assigned status codes; other dimensions of occupational choice were ignored. While this is in keeping with status attainment research in sociology, it is important to recognize that use of nonstatus dimensions of occupations might have generated different conclusions. For example, home-career expectation might be highly related to occupational expectation if the occupations were assigned numbers reflecting social acceptance of female incumbents. Also, occupational expectation is defined in this report as a single number rather than a range. It is likely that high school sophomores have not made a final determination of their occupational choices, and it is possible that home-career expectation affects the range of occupational choices considered; the analyses presented here are not relevant to testing this proposition. Finally, it is possible that home-career expectation effects the dynamics of career development. Females who are oriented toward an occupational career may pass through the stages of development at different rates than do home-oriented females. Since the present data are cross-sectional, hypotheses about the dynamics of career development cannot be tested. There are, of course, other important aspects of career planning to which the present analysis does not apply (e.g., the psychological emphasis on personality), but the purpose of this discussion is to point out some sensitizing examples, rather than to create an exhaustive list.

This chapter has presented a preliminary analysis of the importance of home-career expectation in the career planning of females. Additional research is needed before confidence can be placed in the results. Specifically, additional theory is needed to carefully specify the expected impact of sex-role differentation on career planning. Intensive measurement work is needed to determine the best way to measure home-career expectation. A large body of work has appeared to assess measurement of occupational choice, but very little has been done with home-career choice. Finally, the variance of home-career choice in our data is highly restricted; most respondents selected some combination of emphasis on occupational career and homemaking, and extremely few girls indicated preference for occupational career to the exclusion of home and family. It may be that an adequate assessment of the hypotheses proposed here requires that the female samples are stratified on home-career expectation to insure that a sufficient number of females emphasizing occupational career are included in the samples. It would be useful, for example, to retest the interaction hypotheses (hypotheses 11 and 12) with females who strongly emphasize occupational careers.

FOOTNOTES

[1] The clear superiority of the objective models led to the decision to consider only objective models in this chapter.

[2] The instrument used to measure home-career expectation for females was first developed by Edwards (1969). The measure reflects the compromise that a female chooses between homemaking and career. The scale ranges from a value of one, reflecting a choice of marriage and family exclusively, to a value of five, reflecting a choice of career exclusively. The intermediate values were most often chosen by respondents. Although a multi-item scale might seem preferable to a single item scale, none of those included in the data set tap the plans of daughters and expectations of parents as directly as the single item scale used in analysis in this chapter. Additionally, expected age at marriage (19) was substituted in the path model for home-career expectation (20). The results were not isomorphic to those using home-career expectation, but differences were erratic and provided no more support for the main hypothesis than does home-career expectation.

[3] Limitations and problems of probable misspecification in completely recursive models such as the ones analyzed here are discussed in Curry et al., (1976, Chapter II). Problems and criticisms of the original Wisconsin Model in this regard are ably presented in Kerckhoff and Huff (1974).

[4] It would have been preferable to compare females scoring high on home-career expectation to those scoring low on home-career expectation. The distribution of home-career expectation, however, is such that the same cutting points for creating the high-low dichotomy could not be used for both races and still preserve sufficient number of cases in all groups for analysis.

[5] If career and home oriented girls followed exactly the same model, the average differences reported here for career girls would tend to exceed the average differences for all girls due to the greater sampling variance of path coefficients calculated on the career-oriented subsample.

CHAPTER VI

SUMMARY AND CONCLUSIONS

Introduction

This monograph has focused on the formation of career plans among Black and White females. The research was carried out within the theoretical and empirical framework provided by the "Wisconsin model" of status attainment. The Wisconsin model was formulated primarily to apply to White males; the general goal of the current project has been to determine what modifications of the model are required for females and Blacks. The first volume of the project compared Black and White males, and this volume adds Black and White females to the analysis.

Theoretical Framework

Although numerous variations on the Wisconsin model have been proposed, the theoretical perspective is marked by four central features:

1. Variables associated with career achievements are hypothesized to form causal systems that can be described by simultaneous, linear structural equations. A path analytic framework is adopted for stating and evaluating the equations.

2. Educational achievement, occupational achievement, and with increasing frequency, income are viewed as career achievements. These variables comprise the major dependent variables in the model.

3. Occupations are transformed to an approximate continuous scale reflecting status content of occupations.

4. The model is stated as a chain of effects; parental status, mental ability, and academic performance directly influence significant others' preferences which, in turn, directly affect educational and occupational plans; educational and occupational plans directly affect career achievements. Thus, according to hypothesis, the effect of parental status, for example, on educational plans is indirect, operating primarily through significant others' preferences.

A substantial body of empirical research has been generated to test the model. The chain model finds moderate support in this research, but is seldom substantiated in every detail. Research with minority and female samples is sparce.

Methodology

Data collection was designed to obtain information on the important variables in the Wisconsin model. The data contain measurements of parental socioeconomic status, mental ability, academic performance, significant others' occupational and educational expectation. Occupations were scored on a status dimension. Information about significant others was collected both from the youth and from the significant others. No information about the educational, occupational, and income achievements is contained in the data, but past research indicates fairly strong relationships between educational and occupational expectation and achievement. In addition to the major career-planning variables contained in the Wisconsin model (educational and occupational expectation) females were asked to indicate home-career expectation (i.e., the relative emphasis the respondent expected to place on occupational roles versus home-related roles).

The samples were composed of high school sophomores in the public school system of a medium-sized, midwestern city. The sampling was balanced by race and sex; approximately 120 observations were collected for each race-sex category—Black females, Black males, White females, and White males.

Linear path analysis was used to analyze the data throughout the report. Intergroup comparisons of path coefficients were facilitated by a relatively new standardization technique that permits simultaneous comparison of paths between independent variables and between subgroups—thus avoiding the cumbersome necessity of calculating both standardized and unstandardized coefficients.

Limitations

The findings and interpretations contained in this report must be tempered by the limitations of the data and the analyses. Two limitations apply generally to the study of males and to the present study of females: (1) The data are cross sectional; hence, the dynamics of career planning have not been explored, and estimates of reciprocal causation were omitted. (2) The analysis relied heavily on the linear hypothesis. Although earlier research suggests no significant departure from the linear model (Gasson, Haller, and Sewell, 1972; and Wilson and Portes, 1975), the theoretical discussion offered by Gasson and associates specifying interactions in the model is persuasive enough that one must reserve final judgment.

In addition, the data for females are subject to two specific limiations: (1) Due to funding constraints, initial plans to collect data from nonparental significant others had to be abandoned. In the analysis of career plans of males non-parental expectations of the boys proved to be important to educational expectation for Blacks and occupational expectation for Whites. (2) Both the Black and White, female samples contain a significantly larger percentage of respondents from broken homes than the percentage in the general population. The additive effects of family type (intact family versus broken home) were controlled in the analyses of the exogenous variables without demonstration of significant effect, but the possibility of some interactive effects was not explored.

Summary of Findings

This section is divided into three subsections. The first subsection contains an overview of the most salient findings. The second subsection summarizes the tests of thirteen hypotheses regarding the effects of sex-role differentation that were drawn from the review of literature in Chapter II. Finally, the last subsection presents detailed summaries of each path model.

Since the adjectives perceived, and objective will be used throughout the summaries to modify different significant other variables, it may be helpful to review the meaning of these two terms as used in this report. Perceived significant other variables refer to information about significant others collected from the youth, and objective significant other variables refer to information about significant others collected from significant others.

Overview of salient findings. Six results stand out as the most important observations contained in the report:

1. Significant other variables were observed to be the most accurate predictors of career-choice variables (educational, occupational, and home-career expectation (34, 35, and 20).[1]

2. Objective measures of significant other variables provided more accurate predictions of educational and occupational expectations (34 and 35), and led to closer approximations of the causal chain model hypothesized in the Wisconsin model than did the perceived measures.

3. The home-career expectation (20) of females did not manifest strong effects on educational or occupational expectation (34 and 35), counter to hypothesis.

4. Significant other variables did not affect educational and occupational expectation (34 and 35) for females more strongly than was the case for males, counter to hypothesis.

5. The multiple coefficients of determination in the equations for educational and occupational expectation (34 and 35) for Blacks and females were lower than they were for White males.

6. The *educational* expectation of parents for their daughters (23 and 24) and sons had stronger effects on the daughter's or son's own *occupational* expectation (35) than did the parents' *occupational* expectation for their offspring (26 and 27).

Sex-role differentation hypotheses. Two general themes were drawn from the literature on the socialization of females: (1) Role definitions for females are ambiguous due to inconsistent socialization, and (2) females are more dependent on significant others than are males. For this study, it was concluded that the most important aspect of role ambiguity of females concerns the ambiguity over the relative importance of occupational and home-related roles. Thirteen specific hypotheses were drawn from these two themes and tested as part of the data analyses. These hypotheses are grouped below according to which theme served as the premise on which the hypothesis was based, and the empirical results for each hypothesis are summarized. The reasoning connecting each hypothesis to the premise was described in Chapter II and will not be repeated here, but the reader should recall that the reasoning is informal and should, therefore, be taken tentatively.

Hypotheses associated with ambiguity over the relative importance of occupational and home-related roles were:

Hypothesis 1: The effects of all independent variables on occupational expectation (35) for females is smaller than the corresponding effects for males.

Hypothesis 2: The effects of all independent variables on educational expectation (34) for females is smaller than the corresponding effects for males.

The data analyzed in Chapter IV lent moderately strong support to these two hypotheses.

Hypothesis 5: All independent variables affect occupational expectation for Black females more strongly than they affect occupational expectations for White females.

Hypothesis 6: All independent variables affect educational expectation for Black females more strongly than they affect educational expectation for White females.

Hypotheses five and six were not supported by the data, but it should be noted that both hypotheses also depend, in part, on the claim drawn from the literature that Black females are less ambiguous about occupational roles than are White females. In addition, it was argued in Chapter II that career planning may be less salient to Blacks due to restricted career choices stemming from discrimination; this argument also tends to negate these two hypotheses.

Hypothesis 9: Home-career expectation (20) is positively related to occupational expectation for females, *ceteris paribus.*

Hypothesis 10: Home-career expectation is positively related to educational expectation for females, *ceteris paribus.*

Hypotheses nine and ten received very little support in the data.

Hypothesis 11: For females scoring high on home-career expectation, the effects of all independent variables on occupational expectation should more closely approximate the effects observed for males than is the case for all females combined.

Hypothesis 12: For females scoring high on home-career expectation, the effects of all independent variables on educational expectation should more closely approximate the effects observed for males than is the case for all females combined.

The data showed no support for either of these two hypotheses; in fact, females scoring high on home-career expectation were somewhat less like males than were all females combined. This observation held for both Black and White females.

Hypotheses associated with the theme that females are more dependent on significant others were:

Hypothesis 3: The effect of significant others' educational expectation (23 and 24) of students on the students' own educational expectation (34) is stronger for females than for males.

Hypothesis 4: The effect of significant others' occupational expectation (26 and 27) of students on the students' own occupational expectation (35) is stronger for females than for males.

Hypothesis 13: The home-career expectation of significant others for girls (14 and 17) affects the home-career expectation of the girls for themselves.

Hypothesis 13 was the only one of the above three that was supported by the data, but support for hypothesis 13 was weak.

The following two hypotheses were associated with both themes:

Hypothesis 7: The effect of significant others' educational expectation for students on the students' own educational expectation is higher for Black females than for other subgroups

Hypothesis 8: The effect of significant others' occupational expectation for students on the students' own occupational expectation is higher for Black females than for other subgroups

Neither of these hypotheses was supported by the data, but like hypotheses five and six, they depend, in part on assumptions about the special circumstances of Blacks.

Detailed summary of findings. Three models were estimated in chapter IV, but only the last model will be summarized in detail, since it provides the best explanation of educational and occupational expectation (34 and 35). The first two models shall be presented briefly to maintain continuity.

When an aggregate, perceived significant other variable (28) commonly found in the literature was used, the following results were obtained, generally, across all race-sex subsamples:

A. The direct effects of the significant other variable (28) on educational and occupational expectation (34 and 35) were weaker than obtained in the objective model

B. The coefficients of determination for educational and occupational expectation were generally weaker than in the objective models

When aggregate, objective measures of parents' expectations for their children (22 and 25) were incorporated as the significant other variables, and the subjects' educational and occupational expectations were regressed only on the matching parents' expectation, plus mental ability (11), parents status (1), and academic performance (12), the following results were obtained:

A. Relative to the model employing the perceived measure (28), objective expectations (22 and 25) were better predictors of subject's expectations (34 and 35)

B. Parents' educational expectation was sthe strongest predictor of subjects' educational expectation across all race-sex subsamples

C. With the exception of Black males, parental, occupational expectation (25) was the strongest predictor of occupational expectation of subjects (35)

D. Relative to the model employing the perceived variables (28), the objective model produced a greater increase in the coefficients of determination for educational expectation (34) than in the coefficients of determination for occupational expectation (35)

E. The finding in "D" above and the pattern of residual correlations between parental expectations (22 and 25), and the subjects' expectations for themselves (34 and 35), suggested final model in Chapter IV

The final model estimated in Chapter IV employed the objective expectations of mother and father separately (23, 24, 26, and 27) as significant other variables, and estimated the effect of all parents' educational and occupational expectations (23, 24, 26, and 27) on both educational and occupational expectations (34 and 35). The following results were obtained from this analysis.

A. Among the subsamples of Blacks:

   1. Parental expectations for their children (23, 24, 26, and 27) demonstrated the same pattern of effects on educational expectation of females and males. The father's educational expectation was strongest and mother's educational expectation was second

2. Father's occupational expectation (26), provided the strongest effect on occupational expectation (35) of females, while mother's educational expectation (24) had the strongest effect on the occupational expectation (35) of males

3. In general, some significant other variable was the strongest direct predictor of both educational and occupational expectation for both females and males

4. For both females and males, significant other variables were the primary source of indirect effect of all antecedent variables

5. For females the effects of both socioeconomic status (1) and mental ability (11) on educational expectation were primarily indirect

6. For males the effect of socioeconomic status on educational expectation was primarily direct and the effect of mental ability was primarily indirect.

7. For both females and males the effect of socioeconomic status on occupational expectation was primarily direct while the effect of mental ability was primarily indirect

8. On both educational and occupational expectation, the effect of academic performance was primarily direct for females and indirect for males

B. Among the subsamples of Whites:

1. Parental expectation for their children demonstrated the same pattern of effect on educational expectation for females and males with mother's educational expectation strongest, and father's educational expectation second

2. Father's educational expectation was the best predictor of females' occupational expectation, while mother's educational expectation was the best predictor of males' occupational expectation

3. As in the Black subsamples, some significant other variable was, generally, the strongest predictor of both educational and occupational expectation for both females and males

4. Significant other variables were the primary source of indirect effects of the antecedent variables for both females and males

5. The effects of socioeconomic status (1) and mental ability (11) on educational expectation (34) were primarily indirect for both females and males

6. The effects of socioeconomic status and mental ability on occupational expectation (35) were primarily indirect for females, while the effect of socioeconomic status was primarily indirect, and the effect of mental ability was primarily direct for males

7 Academic performance (12) affected both educational and occupational expectation primarily directly for females and primarily indirectly for males

C. This model produced the highest coefficients of determination for both educational and occupational expectation of the subjects of all models analyzed in Chapter IV, for all race-sex subsamples.

The findings of Chapter V will be summarized in terms of their relevance to educational and occupational expectation. This approach is taken because the primary emphasis of this research is on the formation of educational and occupational expectations.

A. Home-career expectation for females was not associated with strong effects on educational and occupational expectation.

B. Home-career expectation failed to demonstrate either strong or clearly interpretable results either linearly or interactively for both Blacks and Whites.

C. Parental, home-career expectation (14 and 17) for daughter had essentially no effect on daughter's educational and occupational expectation (34 and 35).

D. Inclusion of parental, home-career expectation for daughter and daughter's home-career expectation (20) for self, in regression equations, failed to yield increases in the coefficients of determination for either educational or occupational expectation over those of the last model in Chapter IV.

E. A model in which the daughter's home-career expectation (20) was the ultimate dependent variables, parental status (1) and mental ability (11) were exogenous variables, and academic performance (12), mother's home-career expectation for daughter (17) and father's home-career expectation for daughter (14) were endogenous variables yielded only weak to moderate coefficients of determination. The model did lend some support to the importance of parental influence on home-career expectation of females, however.

Implications for Research and Theory

Four issues are discussed in this section. The first issue concerns differences between career planning of females and Blacks and those of White males. The second issue concerns possible implications of the observation that parental educational expectations for their children (23 and 24) had stronger effects on occupational expectation (35) than did parental occupational expectations of the children (26 and 27). Thirdly, the findings regarding perceived and objective significant other variables are discussed. Finally, the importance of longitudinal data is considered.

Career planning of females and Blacks. Of the thirteen hypotheses regarding sex differences in the career decision making process, only two received reasonably firm support in the data (hypotheses one and two). These two hypotheses stated that educational and occupational expectations (34 and 35) for females are less accurately predicted by all predictor variables than is the case for males. Empirical support was especially strong for occupational expectation, as hypothesized in Chapter II. Failure to support the remaining hypotheses implied: (a) that females are no more dependent on significant others in forming career plans than are males, and (2) home-career expectation (20) is of little consequence in path models for females in which educational and occupational expectation are the ultimate dependent variables.

These results suggest that the broad outlines of the career planning process for females may be similar to that for males. The fact that females' expectations are less accurately explained than are males' may be due to the arbitrary barriers against females in high-status occupations and to the fact that females do not automatically assume that they will have to be the chief "breadwinner" in the household. The fact that R-squares were also uniformly smaller for Blacks' educational and occupational expectations may also be due to discriminatory barriers in the job market. That is, both females and Blacks may formulate their plans more tentatively, thus, giving those plans greater randomness relative to factors that best predict the educational and occupational plans (34 and 35) of White males. This line of reasoning is admittedly speculative, however; it implies that measures of certainty of educational and occupational plans interact with standard independent variables in the baseline model. Most work with measures of certainty has failed to show positive results, however.

While the broad outlines of career planning were found to be similar across race-sex groups, in that significant other variables were associated with the strongest effects on career plans (34, 35, and 20), and home-career expectation variables (20, 27, and 14) were not necessary in the models for females, numerous specific differences in the magnitudes of the path coefficients were observed. Perhaps the most interesting interaction of this type concerned variation in the relative importance of the mothers' and fathers' influence across the subgroups. From Table 9 (p. 42) it is apparent that the dominant parental influence on occupational expectation was, in every subsample, due to the opposite-sexed parent. Thus, for example, father's occupational expectation (26) was the dominant variable in the equation for occupational expectation (35) for Black females, while mother's educational expectation (24) was the dominant variable in the equation for occupational expectation for Black males. This pattern was clear and consistent for all groups; hence; it is worth considering as an empirically generated hypothesis to be checked with additional data.

Educational and occupational expectation. In every subgroup except Black females, either mother's or father's educational expectation (23 or 24) of the daughter or son had a substantially stronger effect on the progeny's occupational expectation (35) than did either parents' occupational expectation of the child (26 or 27); this is an anomalous result that demands further discussion. If the differences had been small, one might overlook them, but in every case (except Black females) the differences were quite large. Three possible explanations are offered: first, it is possible that the youth's educational expectation affects occupational expectation, and vice versa. With the present, cross-sectional data there is no satisfactory way to test this possibility. If educational expectation has a substantially stronger effect on occupational expectation than occupational expectation has on educational expectation, then much of the direct effect of parents' educational expectation for the child on the youth's occupational expectation appearing in our data may actually be due to an indirect effect of parental, educational expectation that operates through the youth's educational expectation. The premise on which this speculation is based, however, seems somewhat unlikely, viz, it does not seem likely that a youth's educational expectation has an effect on occupational expectation that is enough stronger than the reverse effect to account for the observations in the data. (See, however, Kerckhoff, 1971.) Youth are generally aware that education is frequently a prerequisite for particular occupations, thus a high school sophomore may, for example, reason that "If I want to be a teacher, I had better go to college." This type of thought process would tend to generate a fairly strong effect of occupational expectation on educational expectation.

A second possible explanation requires one to postulate two unmeasured variables that have been referred to as "ambition" (Duncan, Haller, and Portes, 1968; and Porter, 1974). There is a substantial body of theory suggesting that career planning progresses from general to specific (Super, 1957; and Ginzberg, 1951). Drawing on this theory, assume that most high school sophomores have formed a general idea that they "want to be somebody" or they "just want to get by," and refer to this general idea as the youth's ambition. The theory suggests that definite ambition develops before definite educational and occupational expectation. Parents may also be more certain about the amount of ambition they have for their children than they are about specific educational and occupational expectation for the youth. It is possible that these two ambition variables—the youth's ambition for self and parental ambition for the youth—serve as linking mechanisms between the youth's educational and occupational expectation and parental, educational and occupational expectation for the youth, and that the youth's ambition directly affects her or his educational and occupational expectation, as shown in the following path diagram (see Figure 5).

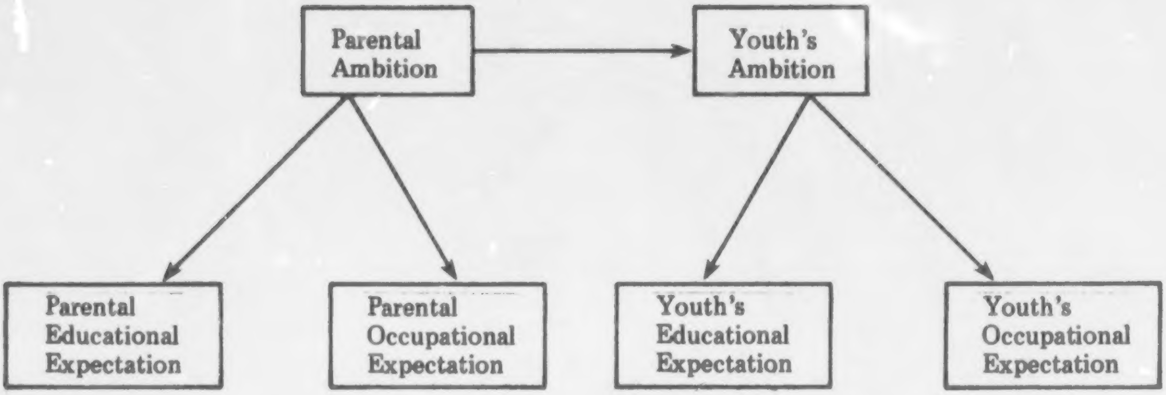
Parental Ambition
Youth's Ambition
Parental Educational Expectation
Parental Occupational Expectation
Youth's Educational Expectation
Youth's Occupational Expectation

Figure 5. Simplified path diagram illustrating the hypothesized place of ambition in educational and occupational planning.

Since education is more immediate than occupation, and educational attainment is a much simpler concept than occupational attainment, it is likely that ambition is translated more strongly into educational expectation than into occupational expectation. If this speculation is true, then the path model represented in Figure 5 would generate a stronger correlation between parental educational expectation and the youth's occupational expectation than between parental occupational expectation and the youth's occupational expectation. These differences between correlations would tend to generate results similar to those observed in our data.

The third possible explanation indicates that differential measurement error may also account for part of the results. Education being a simpler concept than occupational status, one might expect that educational expectation is more accurately measured than occupational expectation. If so, then the formula for "correcting a correlation for attenuation" shows that the difference in measurement accuracy would tend to generate the observed results. The observed correlation between parental educational expectation and youth's occupational expectation would tend to be higher than the correlation between parental occupational expectation and the youth's occupational expectation, because the first correlation contains only one unreliable measure, whereas, the second correlation includes two unreliable variables.

Perceived and objective significant other variables. A third issue raised by the research is the measurement and operationalization of significant other variables. If only the effect of the perceived significant other variable (28) on educational and occupational expectation (34 and 35) had been interpreted as significant other influence in this research, the conclusion would have been that significant others have virtually no role in the formulation of female's career plans. Analyzing the effect of objective significant other variables on females' career plans, on the other hand, implies that significant other influence is the most important factor in the formation of those plans. These findings suggest that use of objective significant other variables is the better approach. In fact, the results reported here indicate that most status attainment research may have underestimated the effect of significant other influence since the large majority of research has worked with perceived significant other variables (see Wilson and Portes, 1975).

It is important to note, however, that the comparisons between perceived and objective significant other variables reported in this document are not based on perfectly comparable measurements. The measurements used here follow those common in the literature; hence, the perceived significant other variable was composed of youth's perceptions of *encouragement* to attend college received from significant others and on perceptions of peer college plans, and the objective significant other variables depended on significant others' *expectations* of the youth. Consequently, comparisons in this monograph between perceived and objective forms are also comparisons between encouragement and expectation. Some studies have shown extremely high correlations between perceived-*expectation*, significant other variables, and youth's expectations (e.g., Williams, 1972; and Kerckhoff and Huff, 1974). It is, therefore, concluded that the relative value of perceived and objective measurements remains an important issue to be resolved by future research. The implications of the findings from this proposed research are quite important. Perceived measures are obviously much cheaper to collect, since parents and other significant others do not have to be contacted—all needed information can be collected from the youth. In fact, the costs of collecting information directly from all significant others would probably be nearly prohibitive for national samples.

There is one research question that can be answered only with both perceived and objective measures of significant other variables. That question is: Do the expectations or encouragements of significant others for youth operate through youth's perceptions of those expectations and encouragements? The symbolic interaction perspective in social psychology suggests that the answer is yes (see Hotchkiss and Scritchfield, 1975). Confirmation of the hypothesis requires perceived and objective measurements for the same youth; the coefficients for objective measures must, then, approach zero when the perceived measures are statisitcally controlled.

Longitudinal data. The specification of path models in this monograph has followed the well-established precedent in the status attainment literature of assuming one-way causal effects between the members of each pair of variables. This precedent has been challenged in recent papers, however, (e.g., Hout and Morgan, 1975; Nolle, 1973; Woelfel and Haller, 1972), and the authors of this report heartily agree that two-way causal effects cannot be eliminated on theoretical grounds for several variable pairs included in the Wisconsin model. However, the authors believe that there is no satisfactory method for testing reciprocal hypotheses in cross-sectional data (econometric methods not withstanding) and have, therefore, specified the models according to their best judgments about the dominant direction of causal effects.[2] The ambiguity about possible two-way causation that remains, however, punctuates the need for longitudinal data. Only with logitudinal data can one carry out empirical tests to determine, for example: (a) the extent to which educational and occupational plans affect each other, (b) whether youths' career plans have some effect on significant others' expectations of the youth—while, at the same time being affected by significant others expectations, or (c) the extent to which academic performance and significant other variables affect each other.

In addition, longitudinal data is essential to describe the process of career planning over time. Hypotheses in the psychological literature indicating that youth pass through stages of career planning should be incorporated into the Wisconsin model and tested with longitudinal data.

Policy Implications

Research findings regarding career-decision making are still to ambiguous to permit firm policy recommendations. The present research is no exception, as indicated by the numerous qualifying remarks throughout this monograph. Consequently, any policy implication that may be drawn from the research should be considered as one input among many inputs that must be considered before policy change is carried out, and the results of policy changes should be carefully monitored.

Crites (1975) has argued that ability variables such as mental ability and academic performance are the strongest determinants of career expectations. If this contention is correct, then there is little chance for intervention to help in career planning, since abiltiy variables are difficult to change by policy decisions. The present research, however, challenges this view. Significant other variables were found to exercise much stronger influence on career plans than ability variables. If the present findings are correct, then one is in a much better position to help students in career planning, since significant others' attitudes are more changeable than are ability variables.

The research findings herein reinforce the frequent call to involve parents in education to a greater extent than has been done in the past. Since parents apparently exercise strong influence on their children's career plans, career planning could benefit by increasing the amount of information about education and jobs available to parents. Schools could take a leading role in disseminating such information, since school counselors generally have ready access to information that parents do not have. The information could be distributed through numerous channels, including PTA meetings, parent-teacher conferences, and fliers sent home with students. In addition, schools could organize special events intended to involve students, parents, teachers, and counselors in career exploration activities. Parents with particular expertise could be asked to give presentations at such events. For further discussion of techniques for involving parents in school, career-planning activities the reader is referred to a handbook entitled, "Involving Significant Others in Career Planning: A Counselor's Handbook" (Burkhardt, et al., 1977).

FOOTNOTES

[1] The reader is reminded that numbers in parentheses following variable names give the number of the variable in Table 1 and Appendix B. Definitions of variables can be found in either location.

[2] See Curry et al, 1976, Appendix B for a defense of this position.

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APPENDIX A

A NOTE ON THE COMPARABILITY OF THE SAMPLE

Introduction

Selected data from the Columbus sample were compared to census data in order to identify possible systematic errors due to sampling. The comparison variables include parental educational attainment, parental employment status, family type (intact, nonintact), age of head of family, and family size. The census comparison areas include the Columbus Metropolitan Area, the Columbus S.M.S.A., Franklin County, Urban Ohio, the North-Central census region and Urban United States. Census data were taken from the 1970 Census summaries, *General Social and Economic Characteristics and Detailed Characteristics* for the United States and for the State of Ohio. The census data are based on a twenty percent sample of the population. All analyses are conducted within race since the sample is balanced by race and therefore not representative of the population on that characteristic.

The precision of the comparisons is limited due to differences in measurement between the sample and census and due to nonavailability of data. Limiting factors will be identified in the discussion of each set of comparisons. The lack of exact comparisons between the sample and the census implies that inferences regarding the systematic error due to sampling must be made with caution. The basis of inference is the level of significance achieved by an appropriate test statistic for each comparison. In the following analysis, either the two-sample difference of proportions tests or the two-sample Kolmogorov-Smirnov test is employed.

Statistical Methods

Prior to reporting the results, a brief note on the statistical procedure is necessary. The Z-test of differences between proportions are computed by the following formula:

$$z = \frac{P_1 - P_2}{\sqrt{\frac{P_1Q_1}{N_1} + \frac{P_2Q_2}{N_2}}}$$

Where P_1 is the proportion reporting a particular characteristic in the census comparison area and P_2 is the proportion reporting the same characteristics for the Columbus sample. Also, $Q_1 = 1-P_1$, and $Q_2 = 1-P_2$; N_1 and N_2 are respective sample sizes. Since the census N's are projected from a 20 percent sample, the Census projections were divided by a constant (5) to estimate the sample size, and the finite population correction was applied. Thus, the above formula becomes:

$$Z = \frac{P_1 - P_2}{\sqrt{\frac{5P_1Q_1}{N_1}\left(\frac{N_1 - n}{N_1 - 1}\right) + \frac{P_2Q_2}{N_2}}}$$

Where N_1 = projected size of the total population in the census comparison area, and n = the size of the sample gathered by the Census Bureau. The factor of 5 corrects for the fact that the Census reports projected the total population size (N_1). The finite population multiplier is given by the term $(N_1 - n)/(N_1 - 1)$. Since $n = 1/5N_1$.

$$Z = \frac{P_1 - P_2}{\sqrt{\frac{5P_1Q_1}{N_1}\left(\frac{N_1 - N_1/5}{N_1 - 1}\right) + \frac{P_2Q_2}{N_2}}} = \frac{P_1 - P_2}{\sqrt{\frac{4P_1Q_1}{N_1 - 1} + \frac{P_2Q_2}{N_2}}}$$

To reject a null hypothesis by a non-directional test at the .05 level, the reported Z value would have to satisfy: $Z < -1.96$, or $Z > 1.96$.

Where comparisons between distributions is desired, the Kolmogorov-Smirnov two sample test is employed (Siegel, 1956). The non-directional test of difference is constituted by comparison of the largest categorial difference between cumulative distributions to the value obtained by the following equation.

$$D_{critical} = 1.36\sqrt{\frac{N_1 + N_2}{N_1N_2}}$$

Where N_1 and N_2 are sample sizes for the census comparison area and the Columbus sample, respectively, and $D_{critical}$ is the value that the maximum, observed, proportion difference must exceed to reject H_0 at the .05 level of significance. When the formula is corrected for the inflated census N's, it becomes:

$$D_{critical} = 1.36\sqrt{\frac{N_1/5 + N_2}{N_1N_2\ (1/5)}}$$

$$D_{critical} = 1.36\sqrt{\frac{N_1 + 5N_2}{N_1N_2}}$$

The test employed for each set of comparisons is indicated in the discussion of the comparisons.

Educational Attainment

This section compares the educational attainment of parents in the Columbus sample to the educational attainment of adults in each of the census comparison areas. In order to achieve comparability between the Columbus sample and census data, two adjustments in the data were made. The first was to aggregate all parents in the Columbus sample who reported training in vocational-technical programs with those receiving a high school diploma. (See: Appendix C, p. 137 for instrumentation of parents education.) This step was taken due to the fact that vocational-technical training is not reported by the Census as part of "regular" schooling (See: U.S. Bureau of the Census, 1970: Appendix B). The comparisons are, therefore, between the proportion of individuals completing twelve or fewer years of education.

Two limitations on the comparability between the sample and census comparison areas should be noted. First, all census data include adults twenty-five years old and older whereas the Columbus sample includes adults with at least one child in the tenth grade. Secondly, the data for the North Central region is not presented by rural-urban residence by the Census.

Table 20 presents the proportion of individuals attaining twelve or fewer years of education and the base N on which the proportion is computed, by race and sex for the sample of parents and the census comparison areas. In none of the race-sex comparisons is the sample significantly different from the appropriate comparison group in the Columbus Metropolitan Area. This suggests that systematic error due to sampling is unlikely. However, there are scattered significant differences for three of the four race-sex groups when comparisons are made to the other census areas. This suggests some limitations on the generalizability of the sample to places outside Columbus.

Male Employment Status

This set of comparisons focuses on difference between the proportion of employed fathers in the Columbus sample and the proportion of employed males of the potential labor force in each of the census areas. Limits to comparability include:

1. North-Central data is not presented by rural-urban residence.
2. Date for the census areas include males sixteen years old and older.

As with the comparisons for educational attainment, systematic error due to sampling is assessed on the basis of differences in proportions.

Table 21 presents the proportions of employed males for the Columbus sample and census groupings controlling for race. No significant differences obtained at the .05 level. The analyses, therefore, provide no evidence for the presence of systematic error due to sampling in the variable, employment status of fathers.

Female Employment Status

Comparisons of the employment status of mothers in the Columbus sample to that of mothers in the census are somewhat more exact than those for fathers in the Columbus sample. This is due to the fact that census, employment-status data are available for mothers of children ages six to

TABLE 20

PROPORTION OF PERSONS COMPLETING TWELVE OR FEWER YEARS OF SCHOOLING AMONG PARENTS IN THE COLUMBUS FEMALE SAMPLE AND ADULTS TWENTY-FIVE YEARS OLD AND OLDER IN SELECTED CENSUS COMPARISON REGIONS CONTROLLING FOR RACE AND SEX*

			CENSUS AREAS					
RACE	**SEX**	**Columbus Sample**	**Columbus Metropolitan**	**Columbus SMSA**	**Franklin County**	**Ohio Urban**	**North-Central Region**	**U.S. Urban**
BLACK	**FEMALE**	.851 n = 94	.882 n = 25,532	.876 n = 27,052	.876 n = 26,641	.903 n = 243,863	.888 n = 1,133,796	.871 n = 5,225,956
	MALE	.783 n = 60	.876 n = 21,887	.870 n = 23,381	.869 n = 22,951	.897@ n = 205,963	.887 n = 972,273	.872 n = 4,336,951
WHITE	**FEMALE**	.853 n = 116	.807 n = 120,589	.775@ n = 220,547	.770@ n = 198,873	.828 n = 2,057,588	.820 n = 14,703,612	.789 n = 38,108,638
	MALE	.650 n = 103	.719 n = 104,260	.688 n = 195,495	.676 n = 174,914	.752@ n = 1,794,213	.789 n = 13,335,046	.707 n = 33,362,905

*The upper figure in each cell indicates the proportion of individuals completing twelve or fewer years of education. The lower figure in each cell indicates the base n on which the proportion was computed. It should be notad that data is not available by rural-urban residence for the North-Central Region.

@ $P(P_1 = P_2) \leq \alpha = .05$ NOTE: All comparisons are between the Columbus Sample and a census comparison area.

TABLE 21

PROPORTION OF FATHERS EMPLOYED FOR THE COLUMBUS FEMALE SAMPLE AND MALES SIXTEEN YEARS OLD AND OLDER FOR THE CENSUS COMPARISON REGIONS BY RACE*

		CENSUS AREAS					
RACE	Columbus Sample	Columbus Metropolitan	Columbus SMSA	Franklin County	Urban Ohio	North-Central Region	Urban U.S.
BLACK	.967 n = 60	.941 n = 20,214	.943 n = 21,403	.942 n = 21,087	.925 n = 195,514	.922 n = 920,117	.935 n = 3,592,377
WHITE	.941 n = 102	.965 n = 110,932	.970 n = 204,413	.970 n = 184,735	.969 n = 1,826,380	.966 n = 13,208,499	.964 n = 32,536,315

*The upper figure in each cell indicates the proportion of employed males. The lower figure in each cell indicates the base on which the proportion was computed. It should also be noted that the data is not available by rural-urban residence for the North-Central Region.

@$P(P_1 = P_2) < \alpha = .05$ NOTE: No significant differences obtained at this level of confidence. All comparisons are between the Columbus Sample and a census comparison area.

seventeen years of age. However, this comparison is still not exact, since many mothers in the census data may not have children in the tenth grade. Also, as with other comparisons, data is not available by rural-urban residence for the North-Central Region. Comparisons are made within racial groups.

Table 22 presents the data. As with fathers' employment status, no statistically significant differences obtained for employment status between mothers in the Columbus sample and those in the census comparison areas. Thus, the data show no evidence of systematic sampling bias.

Family Type

Comparisons of the Columbus sample to the Columbus Metropolitan census area, the Columbus S.M.S.A., and Franklin County regions are not presented, because the census data are not presented by race and the Columbus sample is balanced by race. The Columbus sample cannot, therefore, be compared against the sampling frame from which it was drawn. The North-Central data is not available by rural-urban residence.

Table 23 presents the proportion of intact families for the Columbus sample and for the Ohio Urban, the North-Central and Urban United States census areas, by race. All differences are greater than would be expected due to random sampling. Further, the actual differences in proportions between the Columbus sample and the census regions make it appear unlikely that significance is due to differences between the Columbus Metropolitan Area and other census regions. This inference is reinforced by the relative equality of the proportions of intact families for both Blacks and Whites across the census areas for which appropriate data are available. Time and funding limits prohibit detailed exploration of the possible implications of the unusual number of nonintact families for the Columbus sample. However, given the lack of information, the findings of this research should be taken more tentatively than would normally be the case. Future research must confirm or contradict them.

Age Distribution

As in the case of family type, data are available by race on ages of heads of families only for the Ohio Urban, the North-Central, and the Urban United States census areas. Data are not available by rural-urban residence for the North-Central Region.

Cumulative distributions of the age of head of family are presented by race and family type for the Columbus sample and one of the census comparison groups in each of Tables 24(a) through 24(c). In no comparison by race and family type for any of the census regions do the cumulative distributions of the Columbus sample subgroups obtain statistical significance. This suggests that although the sample is characterized by an unusual number of nonintact families, the age distribution of the heads of families remains essentially like that of the population for both intact and nonintact families. This provides at least minimal evidence that the bias due to nonintact families is not confounded with other characteristics.

Family Size

Data on family size are not available by age of child in the census reports. This set of comparisons is presented to demonstrate the ability of Kolmorogor-Smirnov, two-sample test to detect

TABLE 22

PROPORTION OF MOTHERS EMPLOYED FOR THE COLUMBUS FEMALE SAMPLE AND MOTHERS OF CHILDREN SIX TO SEVENTEEN YEARS OLD FOR THE CENSUS COMPARISON REGIONS BY RACE*

		CENSUS AREAS				
RACE	Columbus Sample	Columbus Metropolitan	Columbus SMSA	Franklin County	Urban Ohio	Urban U.S.
BLACK	.577 n = 111	.626 n = 4,154	.630 n = 4,552	.627 n = 4,459	.595 n = 42,610	.537 n = 747,558
WHITE	.475 n = 122	.481 n = 23,017	.474 n = 50,399	.471 n = 44,386	.433 n = 454,386	.465 n = 8,165,426

*The upper figure in each cell indicates the proportion of employed mothers. The lower figure in each cell indicates the base on which the proportion was computed. It should also be noted that comparison for the North-Central region is not included because the data are not presented by race for that region and the Columbus Sample is not proportional by race. The comparison is, therefore, inappropriate.

@P $(P_1 = P_2) < \alpha = .05$ NOTE: No significant differences obtained at this level of confidence. All comparisons are between the Columbus Sample and a census comparison area.

TABLE 23

PROPORTION OF INTACT FAMILIES IN THE COLUMBUS FEMALE SAMPLE AND AMONG FAMILIES WITH CHILDREN THIRTEEN TO NINETEEN YEARS OF AGE IN SELECTED CENSUS COMPARISON AREAS

RACE	COLUMBUS SAMPLE	OHIO URBAN	NORTH-CENTRAL REGION	URBAN U.S.
BLACK	.560 n = 116	.672@ n = 66,762	.653@ n = 305,623	.663@ n = 1,475,78
WHITE	.816 n = 125	.907@ n = 702,521	.910@ n = 3,675,950	.896@ n = 12,522,7

*The upper figure in each cell indicated the proportion of intact families. The lower figure in each cell indicates the
on which the proportion was computed. It should also be noted that comparisons for the Columbus Metropolitan
Columbus, SMSA, and Franklin County are not presented because data are not presented by race for these areal un
the Columbus sample is not proportional by race. The comparisons, are, therefore, inappropriate.

@P ($P_1 = P_2$) $< \alpha = .05$. NOTE: All comparisons are between the Columbus sample and a census comparison a

TABLE 24a

CUMULATIVE DISTRIBUTION OF AGE OF HEADS OF FAMILIES FOR THE COLUMBUS FEMALE SAMPLE AND OF THE HEADS OF FAMILIES WITH CHILDREN THIRTEEN TO NINETEEN YEARS OF AGE IN THE OHIO URBAN CENSUS AREA CONTROLLING FOR FAMILY TYPE AND SIZE

AGE OF HEAD	BLACK				WHITE			
	Intact		Female Head		Intact		Female Head	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
65+	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
45–64	.972	.979	.994	1.000	.988	.989	.991	1.000
35–44	.510	.426	.717	.756	.471	.457	.503	.714
Below 35	.085	.000	.208	.146	.041	.022	.095	.190
Sample Size	106,121	47	106,121	41	637,053	92	65,468	21

NOTE: In no comparison is the maximum categorical difference between the Columbus Sample and the Census estimates greater than would be expected due to sampling as tested by the Kolmogorov-Smirnov nondirectional test for large samples, $p < .05$. (See Siegel, 1956: 131)

TABLE 24b

CUMULATIVE DISTRIBUTION OF AGE OF HEADS OF FAMILIES FOR THE COLUMBUS FEMALE SAMPLE AND OF THE HEADS OF FAMILIES WITH CHILDREN THIRTEEN TO NINETEEN YEARS OF AGE IN THE NORTH CENTRAL REGION CONTROLLING FOR THE FAMILY TYPE AND RACE

AGE OF HEAD	BLACK				WHITE			
	Intact		Female Head		Intact		Female Head	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
65+	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
45–64	.972	.979	.992	1.000	.987	.989	.990	1.000
35–44	.526	.426	.712	.756	.460	.457	.497	.714
Below 35	.096	.000	.220	.146	.040	.022	.081	.190
Sample Size	199,502	47	106,121	41	3,329,248	92	328,702	21

NOTE: In no comparison is the maximum categorical difference between the Columbus Sample and the Census estimates greater than would be expected due to sampling variance as tested by the Kolmogorov-Smirnov non-directional test for large samples, p < .05. (See Siegel, 1956: 131)

TABLE 24c

CUMULATIVE DISTRIBUTION OF AGE OF HEADS OF FAMILIES FOR THE COLUMBUS FEMALE SAMPLE AND OF THE HEADS OF FAMILIES WITH CHILDREN THIRTEEN TO NINETEEN YEARS OF AGE IN URBAN UNITED STATES CONTROLLING FOR FAMILY TYPE AND RACE

AGE OF HEAD	BLACK				WHITE			
	Intact		Female Head		Intact		Female Head	
	Census	Sample	Census	Sample	Census	Sample	Census	Sample
65+	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
45–64	.964	.979	.988	1.000	.986	.989	.992	1.000
35–44	.493	.426	.666	.756	.460	.457	.520	.714
Below 35	.093	.000	.202	.146	.043	.022	.097	.190
Sample Size	977,919	47	497,869	41	11,218,341	92	1,302,726	21

NOTE: In no comparison is the maximum categorical difference between the Columbus Sample and the Census estimates greater than would be expected due to sampling variance as tested by the Kolmogorov-Smirnov nondirectional test for large samples, p = .05. (See Siegel, 1956: 131) gross discrepancies between samples. This is due to the fact that the census data include all families with at least one child of any age. Family size in the sample would consequently be expected to be larger than that in the census.

Tables 25(a) and 25(b) present cumulative distributions of family size for the Columbus sample and two census regions controlling for race. As expected, all comparisons are statistically significant. Inspection of the tables reveals that the differences are due to larger family sizes in the Columbus sample, as expected.

Summary and Discussion

Of the variables examined only family type suggests potential bias due to sampling. While significant differences were obtained in the analysis of family size, they were expected and do not reflect on potential sampling bias *per se.* However, the findings concerning intact families (i.e., Columbus sample proportion of intact families is smaller than census proportions) do imply sampling bias which could affect the results of the analyses. The results of any analyses of these data should, therefore, be held in abeyance pending future research. On the other hand, the relative absence of statistically significant differences between other variables in the Columbus sample and the census areas provides some basis for believing the one potential source of sampling bias identified is not confounded with other variables.

A final note on the analyses of this appendix is warranted. The variables of central concern in the main text of this report are such that their population parameters are not identified in the census or anywhere else (e.g., parents' expectations for child). This means that the analysis of this appendix provides only a minimal basis for inference regarding the possibility of sampling bias among the variables analyzed in the main text. The inference must follow the reasoning: If there is no evidence of sampling bias for most variables which, in the opinions of the researchers, are relevant to the variables of central concern, then there will probably be no sampling bias among the variables of central concern. Obviously, this argument does not meet stringent standards of deductive rigor.

TABLE 25a

CUMULATIVE DISTRIBUTION OF FAMILY SIZE FOR THE COLUMBUS FEMALE SAMPLE AND THE OHIO URBAN CENSUS REGION CONTROLLING FOR RACE

	BLACK		WHITE	
Family Style	Census	Sample	Census	Sample
7+	1.000	1.000	1.000	1.000
6	.819	.445	.914	.638
5	.698	*.286	.810	.433
4	.525	.151	.621	*.142
3	.284	.084	.328	.024
Sample Size	165,191	119	1,685,207	127

*$P\ (D_i = 0) \leqslant \alpha = .05$ where D_i is the maximum cumulative difference between the samples (Siegel, 1956: 127-136).

TABLE 25b

CUMULATIVE DISTRIBUTION OF FAMILY SIZE FOR THE COLUMBUS FEMALE SAMPLE AND THE URBAN UNITED STATES CONTROLLING FOR RACE

	BLACK		WHITE	
Family Size	Census	Sample	Census	Sample
7+	1.000	1.000	1.000	1.000
6	.789	.445	.918	.638
5	.667	*.286	.817	.433
4	.502	.151	.627	*.142
3	.274	.084	.324	.024
Sample Size	3,352,258	119	28,524,966	127

*$P\ (D_i = 0) \leqslant \alpha = .05$ where D_i is the maximum cumulative difference between the samples (Siegel, 1956: 127-136).

APPENDIX B

OPERATIONAL DEFINITIONS AND DESCRIPTIVE STATISTICS FOR ALL VARIABLES

This appendix describes the operational definitions for every variable used in the body of the report. Each of the definitions is determined by responses to one or more items on the questionnaires; all items entering into the definition of a variable are reproduced verbatim in Appendix C. The operational definitions contained in this appendix refer to the items that are displayed in Appendix C. Items are referenced by number within questionnaire, the five questionnaires being SID (student's questionnaire), EDSO (Educational Definers for Self and Object, completed by students), ODSO (Occupational Definers for Self and Object, completed by students), PID-I (father's questionnaire, completed by fathers), and PID-II (mother's questionnaire, completed by mothers).

In addition, means and standard deviations are reported for each variable, and correlations are presented for every pair of variables. All descriptive statistics are presented separately for each subgroup (Black females, White females, Black males, and White males) and for the combined samples. Statistics reported for the combined sample cannot be interpreted as population estimates since the samples are stratified by sex and race. For females, two sets of data are included—one set for the comparisons with males, and one set for the analyses in Chapter V in which no comparisons with males were carried out.

The operational definitions are summarized below. For all cases in which variables are defined as averages of more than one item, the composite score was calculated as a missing-data average, i.e., whenever information for some of the component items was missing, the average of the items for which information was present defined the score for the composite variable. This procedure is justified on the grounds that partial information is better than no information.

The first five variables were measured for the samples of females and for the samples of males.

1. Family status (SES) . . . defined as the average of the standard scores for father's occupational status (variable 2), father's education (variable 3), and mother's education (variable 5).

2. Father's occupational status (FO) . . . defined as the Duncan SEI score (Duncan, 1961) associated with the occupation listed by the father in response to an open-ended question requesting that he identify his current job (PID-I, q. 6). When the father's report of occupational status was missing, an estimate based on the student's report was substituted (SID-I, q. 1). Bivariate regression analyses for each subgroup were carried out in which the father's report of his occupation was the dependent variable and the student's report, the independent variable. Missing observations were skipped over in these calculations. The resulting regression weights were applied to the student's report to estimate father's occupational status when the father's report was missing. One may question whether regression weights calculated from available data can be legitimately applied to missing data. Only if the missing data is random is the procedure strictly justified. However, it was decided that

using student's report is preferable to assuming that no information about father's occupation is available.

3. Father's education (FE) . . . determined by the father's response to a closed-ended question (PID-I, q. 22) inquiring about the highest level of education completed. The assignment of scores to education are included in the reproduction of the question in Appendix C. When the father's response was missing an estimate based on the student's report (SID I, q. 2) was substituted. The procedures for establishing the estimate were identical to the procedures used for father's occupational status (variable 2).

4. Mother's occupational status (MO) . . . defined as the Duncan SEI score (Duncan, 1961) associated with the occupation listed by the mother in response to an open-ended question requesting that she identify her current job, if employed (PID-II, q. 6). When the mother's report was missing, an estimate based on the student's report was substituted (SID-I, q. 3). The procedures for establishing the estimate were identical to the procedures used for father's occupational status (variable 2).

5. Mother's education (ME) . . . determined by the mother's response to a closed-ended question (PID-II, q. 22) inquiring about the highest level of education completed. The assignment of scores to education are included in the reproduction of the question in Appendix C. When the mother's response was missing an estimate based on the student's report (SID I, q. 4) was substituted. The procedures for establishing the estimate were identical to the procedures used for father's occupational status (variable 2).

6. Mother's work status (MWS) . . . determined by mother's response to two questions (PID-II, q's. 5 & 7). There are three levels in MWS—not working = 0, part-time work = 1, and full-time work = 2. (This variable is included only for mothers of female students.)

Variables seven through twelve were measured for the female and male samples.

7. Family size (FS) . . . defined by the number of children (including the respondent) in the family, as reported by the student (SID-I, q's. 5 & 6). Each respondent was asked to list the age of each of her/his brothers and of each of her/his sisters. Family size was determined by counting the number of ages listed and adding one to include the respondent.

8. Number of brothers (#BRO). Each student was asked to list the ages of each of her/his brothers. This variable was defined by the number of brothers whose ages were listed by the student (SID-I, q. 5).

9. Number of sisters (#SIS). Each student was asked to list the ages of each of her/his sisters. This variable was defined by the number of sisters whose ages were listed by the student (SID-I, q. 6).

10. Family type (FT) . . . based on the student's response to a question asking whether both parents lived in the home (SID-I, q. 7). Family type has two categories—intact home = 2, and broken home = 1.

11. Mental ability (MA) . . . measured by the Henman-Nelson Test of Mental Ability (Henman and Nelson, 1942) administered especially for the study.

12. Academic performance (AP) . . . defined as the average grade earned in academic subjects by the student during his/her freshman year. Numbers were assigned to grades on a

five-point scale (A = 4, B = 3, C = 2, D = 1, and F = 0). Grades were taken from school records.

Variables 13 through 21 were measured only for the female samples.

13. Father's expected age at marriage for daughter (FAM) . . . based on the father's response to a question asking him to indicate the age at which he would prefer to see his daughter get married (PID-11, q. 23). Ages were coded as listed; collapsed age categories were not created.

14. Father's home-career expectation for daughter (FH-CE) . . . based on the father's choice from a list of five alternatives, each of which describes a different combination of emphasis on homemaking and paid employment. The two extreme categories indicate full-time homemaker and full-time employment without marriage and family (PID-I, q. 27). This variable is intended to measure the father's expectation for his daughter after reality constraints have been considered.

15. Father's general home-career orientation (FH-CG) . . . defined by the average of the father's responses to five Likert items designed to measure the preference for homemaker and paid-employment roles for women (PID-I, q's. 28 through 32). The items are intended to measure the father's general attitude, making no reference to his daughter.

16. Mother's expected age at marriage for daughter (MAM) . . . based on the mother's response to a question asking her to indicate the age at which she would prefer to see her daughter get married (PID-1, q. 23). Ages were coded as listed; collapsed age categories were not created.

17. Mother's home-career expectation for daughter (MH-CE) . . . based on the mother's choice from a list of five alternatives, each of which describes a different combination of emphasis on homemaking and paid employment. The two extreme categories indicate full-time homemaker and full-time employment without marriage and family (PID-II, q. 27). This variable is intended to measure the mother's expectation of her daughter after reality constraints have been considered.

18. Mother's general home-career orientation (MH-CG) . . . defined by the average of the mother's responses to five Likert items designed to measure preference for homemaker and paid-employment roles for women (PID-II, q's. 28 through 32). The items are intended to measure the mother's general attitude, making no reference to her daughter.

19. Daughter's expected age at marriage (AM) . . . defined by the daughter's response to an open-ended question requesting her to indicate how old she expected to be when she marries (SID-I, q. 10). Responses were scored in years of age; collapsed categories were not used.

20. Daughter's home-career expectation for self (H-CE) . . . based on the daughter's choice from a list of five alternatives, each of which describes a different combination of emphasis on homemaking and paid employment. The two extreme categories indicate full-time homemaker and full-time employment without marriage and family (SID-I, q. 13). This variable is intended to measure the daughter's expectation regarding her relative emphasis on home and career during her adult life.

21. Daughter's general home-career orientation (H-CG) . . . defined by the average of the daughter's responses to five Likert items designed to measure preference for homemaker and paid-employment roles for women (SID-1, q's. 14 through 18). The items are intended to measure the daughter's general attitude, making no reference to her personal plans.

The remaining variables were measured for the samples of females and for the samples of males.

22. Parents' educational expectation for daughter/son (EEP) . . . defined as the average of the mother's and father's educational expectation for their dauther or son as reported by each parent (variables 23 and 24, respectively).

23. Father's educational expectation for daughter/son (FEF) . . . defined by father's response to a closed-ended question requesting that he indicate the highest level of education that he expected of his daughter or son (PID-I, q. 34). The variable is intended to measure the father's educational expectation for his daughter or son after reality constraints are considered—in contrast to the father's desire for his daughter or son if no constraints, such as limited finances, existed.

24. Mother's educational expectation for daughter/son (EEM) . . . defined by the mother's response to a closed-ended question requesting that she indicate the highest level of education that she expected for her daughter or son (PID-II, q. 34). The variable is intended to measure the mother's educational expectation for her daughter or son after reality constraints are considered—in contrast to the mother's desire for her daughter or son if no constraints, such as limited finances, existed.

25. Parents' occupational expectation for daughter/son (OEP) . . . defined as the average of the mother's and father's occupational expectation for their daughter or son, as reported by each parent (variables 26 and 27, respectively).

26. Father's occupational expectation for daughter/son (OE) . . . defined as the father's responses to a version of the Occupational Aspiration Scale (Haller and Miller, 1971) in which all item stems of each of the eight questions were changed to refer to the dauther or son, rather than to the respondent (PID-I, q's. 35 through 42).

27. Mother's occupational expectation for daughter/son (OEM) . . . defined by the mother's responses to a version of the Occupational Aspiration Scale (Haller and Miller, 1971) in which all the item stems of each of the eight questions were changed to refer to the daughter or son, rather than to the respondent (PID-II, q's. 35 through 42).

28. Aggregate perceived significant other variable for education (PSOE) . . . defined as the average of variables 29, 32, and 33. This variable reflects parent and teacher encouragement to attend college and peer plans to attend college, as perceived by the daughter or son.

29. Perceived parental educational encouragement (PEE) . . . defined as the average of variables 30 and 31. This variable reflects parental encouragement to attend college, as perceived by the daughter or son.

30. Perceived father's educational encouragement (FEE) . . . based on the daughter's or son's response to a question asking how much encouragement her/his father had given her/him to attend college (EDSO, q. 1). Five Likert-type response alternatives were provided.

31. Perceived mother's educational encouragement (MEE) . . . based on the daughter's or son's response to a question asking how much encouragement her/his mother had given her/him to attend college (EDSO, q. 2). Five Likert-type response alternatives were provided.

32. Perceived teacher's educational encouragement (TEE) . . . based on the student's response to a question asking how much encouragement her/his teachers had given her/him to attend college (EDSO, q. 3). Five Likert-type response alternatives were provided.

33. Perceived peer college plans (PP) . . . based on the student's response to a question asking for her/his impression of the proportion of her/his peers who planned to attend college (SID-I, q. 19). The student was asked to check one of four response alternatives.

34. Daughter's/son's educational expectation for self (EE) . . . defined by the student's response to a closed-ended question requesting that she/he indicate the highest level of education that she/he expected to achieve (EDSO, q. 6). The variable is intended to measure educational expectation after reality constraints have been considered.

35. Daughter's/son's occupational expectation for self (OE) . . . defined as the Duncan SEI score (Duncan, 1961) associated with the occupation listed by the student in response to an open ended question asking that she/he list the occupation that she/he expected to obtain (ODSO, q. 3). The variable is intended to measure occupational expectation after reality constraints have been considered.

36. Race of student (RACE) . . . defined by two categories–Black and White. The race of each student was determined from school records.

37. Sex of student (SEX).

Means, standard deviations and correlations for all variables and for each subgroup are reported in Tables 26 through 35. Tables 26 through 28 contain data only for the female students, and the remaining tables permit female-male comparisons. Slight discrepancies between the data in the first three tables and the remaining data occur due to the fact that the first three tables include responses from the two schools for which no data were gathered from males.

TABLE 26

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR BLACK FEMALES: ALL VARIABLES

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NUMBER OF CASES =      119

   VARIABLE                      STANDARD
    NUMBER         MEANS        DEVIATIONS

        1         -0.2242         0.7066
        2         26.6106        18.9035
        3          6.6691         2.1553
        4         30.4384        17.4900
        5          6.7730         1.7226
        6          1.2211         0.9473
        7          5.1092         2.7580
        8          1.9328         1.6089
        9          2.2353         1.5385
       10          1.5462         0.5000
       11         90.5329        10.3062
       12          2.2723         0.8379
       13         24.0000         2.6135
       14          2.8644         1.0248
       15          3.2700         0.7950
       16         23.5000         3.6440
       17          3.0000         1.0473
       18          3.4165         0.7851
       19         22.7549         3.3313
       20          3.1695         0.9365
       21          3.5546         0.6781
       22          6.2602         2.3965
       23          6.7333         2.5168
       24          6.0860         2.4435
       25         55.6195         8.6148
       26         54.9173         9.2529
       27         56.3327         9.2668
       28          3.6702         0.5825
       29          4.6547         0.7971
       30          3.8491         0.8706
       31          5.2857         1.0012
       32          3.6261         0.8107
       33          2.7311         0.9974
       34         16.0420         2.4886
       35         56.7054        21.4982
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NOTES: 1) The data in Table 26 are based on the full sample of Black females, including the two schools from which no data were collected for males. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 26 – Cont.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.0000	0.7059	0.7632	0.3042	0.7893	0.0816	-0.2313	-0.1494	-0.2151	-0.1591	0.2477	0.2050	0.0854	0.0677
2	0.7059	1.0000	0.3622	0.1299	0.2142	-0.0506	-0.1658	-0.0888	-0.1957	-0.0474	0.2300	0.1579	-0.0666	-0.1611
3	0.7632	0.3622	1.0000	0.0479	0.3414	0.0906	-0.1041	-0.1346	-0.0405	-0.1886	0.0811	0.1070	0.0872	0.1219
4	0.3042	0.1299	0.0479	1.0000	0.3726	0.2680	-0.1679	-0.0535	-0.2041	-0.0656	0.1097	-0.0470	0.1288	-0.1966
5	0.7893	0.2142	0.3414	0.3726	1.0000	0.0741	-0.3310	-0.1861	-0.3204	-0.0975	0.2534	0.1803	0.1692	0.1340
6	0.0816	-0.0506	0.0906	0.2680	0.0741	1.0000	-0.0712	-0.0363	-0.0883	-0.1458	0.1965	-0.0137	-0.0138	0.0673
7	-0.2313	-0.1658	-0.1041	-0.1679	-0.3310	-0.0712	1.0000	0.7369	0.8162	0.0301	-0.2159	-0.0013	-0.3566	-0.0168
8	-0.1494	-0.0888	-0.1346	-0.0535	-0.1861	-0.0363	0.7369	1.0000	0.2351	0.0892	-0.0527	0.0157	-0.1305	0.0697
9	-0.2151	-0.1957	-0.0405	-0.2041	-0.3204	-0.0883	0.8162	0.2351	1.0000	-0.0288	-0.2679	-0.0149	-0.2948	0.0099
10	-0.1591	-0.0474	-0.1886	-0.0656	-0.0975	-0.1458	0.0301	0.0892	-0.0288	1.0000	0.1738	0.1183	0.0516	-0.0744
11	0.2477	0.2300	0.0811	0.1097	0.2534	0.1965	-0.2159	-0.0527	-0.2679	0.1738	1.0000	0.3415	0.2110	0.1240
12	0.2050	0.1579	0.1070	-0.0470	0.1803	-0.0137	-0.0013	0.0157	-0.0149	0.1183	0.3415	1.0000	-0.0594	0.1047
13	0.0854	-0.0666	0.0872	0.1288	0.1692	-0.0138	-0.3566	-0.1305	-0.2948	0.0516	0.2110	-0.0594	1.0000	0.2945
14	0.0677	-0.1611	0.1219	-0.1966	0.1340	0.0673	-0.0168	0.0697	0.0099	-0.0744	0.1240	0.1047	0.2945	1.0000
15	0.1800	0.0541	0.1730	0.0184	0.1846	0.2536	-0.3455	-0.2830	-0.2049	0.1532	0.3266	0.0743	0.2322	[illegible]
16	0.0437	0.0394	0.0629	0.2765	0.0860	-0.0530	0.0332	0.1163	-0.0185	-0.2341	-0.0009	0.0535	0.2173	0.1274
17	0.0504	0.0192	0.0967	-0.0199	0.0585	-0.1345	0.0938	0.0887	0.0676	-0.0411	0.0365	0.1422	0.2377	[illegible]
18	0.1455	-0.0528	0.0771	0.0274	0.2259	0.2039	-0.0587	0.1377	-0.1287	0.1423	0.2091	0.1474	[illegible]	[illegible]
19	-0.2612	-0.0177	-0.2508	-0.0162	-0.2126	-0.1595	-0.0015	0.0450	-0.0410	0.0444	-0.0175	-0.1077	0.4444	0.1345
20	-0.1325	-0.0457	-0.1610	-0.1205	-0.0811	-0.1839	0.1350	0.1708	0.0875	0.0393	-0.0753	0.0797	0.1541	[illegible]
21	0.2734	0.2044	0.0761	-0.0672	0.2576	-0.0100	-0.2189	-0.0409	-0.2497	0.0312	0.4677	0.2503	0.3220	[illegible]
22	0.1837	0.0500	0.1417	0.2897	0.2638	-0.0085	-0.1380	0.0155	-0.2462	0.0533	0.2264	0.3060	0.2979	[illegible]
23	0.1649	-0.0551	0.2295	0.1946	0.2367	0.0932	-0.2916	-0.1948	-0.2259	-0.0605	0.2020	0.1474	0.4000	[illegible]
24	0.2015	0.0643	0.1165	0.3140	0.2755	-0.0403	-0.1482	0.0495	-0.2381	0.0766	0.2097	0.2817	0.3113	[illegible]
25	0.2180	0.0791	0.1095	0.3152	0.2907	0.0347	-0.3330	-0.0149	-0.2630	-0.0863	0.2284	0.1667	0.3437	[illegible]
26	0.1901	0.0200	0.1429	0.2252	0.2537	0.1036	-0.1939	0.0171	-0.2442	-0.0844	0.3146	0.1693	0.3152	[illegible]
27	0.1948	0.1264	0.0751	0.2317	0.2462	0.0184	-0.2772	-0.0045	-0.3370	-0.0390	0.1606	0.1415	[illegible]	[illegible]
28	0.0968	0.0534	0.1521	0.0350	0.0382	-0.0066	-0.1483	-0.1120	-0.1190	0.1436	0.1723	0.1425	[illegible]	[illegible]
29	0.0604	0.0480	0.0232	0.1215	0.0186	0.0710	-0.2181	-0.1766	-0.1781	-0.0399	0.0727	0.1400	[illegible]	[illegible]
30	0.1434	0.1400	0.0989	0.1075	0.1416	-0.0158	-0.2976	-0.2467	-0.2367	-0.0076	0.0222	0.0905	[illegible]	[illegible]
31	-0.0257	-0.0451	-0.0471	0.1241	-0.0558	0.0504	-0.1250	-0.0616	-0.1223	0.1758	0.1491	0.1545	0.1317	[illegible]
32	-0.0149	-0.0551	-0.0379	0.0412	0.0249	-0.1089	-0.1455	-0.1276	-0.0924	0.0586	0.0225	0.1132	[illegible]	-0.1524
33	0.1186	0.0856	0.2533	-0.0789	0.0345	-0.0189	0.0231	0.0573	-0.0108	0.1451	0.2137	0.0793	0.0457	0.1342
34	0.1337	0.0843	0.0365	0.2725	0.1414	0.0079	-0.2526	-0.1474	-0.2340	0.0359	0.0900	0.2325	0.2725	[illegible]
35	0.1642	0.0965	0.0185	0.1195	0.2416	-0.0506	-0.2620	0.0606	-0.2305	0.1171	0.1409	0.1242	0.1260	[illegible]

Table 26 – Cont.

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	0.1800	0.0437	0.0504	0.1455	-0.2612	-0.1325	0.2734	0.1837	0.1649	0.2015	0.2180	0.1901	0.1948	0.0968
2	0.0591	0.0394	0.0192	-0.0528	-0.0177	-0.0457	0.2844	0.0500	-0.0551	0.0643	0.0791	0.0200	0.1084	0.0534
3	0.1730	0.0629	0.0967	0.0771	-0.2508	-0.1610	0.0761	0.1417	0.2395	0.1165	0.1095	0.1429	0.0731	0.1521
4	0.0184	0.2765	-0.0169	0.0274	-0.0162	-0.1205	-0.0672	0.2897	0.1946	0.3240	0.3152	0.2352	0.3312	0.0350
5	0.1846	0.0860	0.0585	0.2259	-0.2126	-0.0811	0.2576	0.2638	0.2367	0.2759	0.2907	0.2837	0.2462	0.0382
6	0.2536	-0.0530	-0.1395	0.2039	-0.1595	-0.1839	-0.0100	-0.0085	0.0932	-0.0403	0.0347	0.1036	0.0184	-0.0066
7	-0.3455	0.0332	0.0938	-0.0587	-0.0015	0.1350	-0.2189	-0.1850	-0.2916	-0.1482	-0.3030	-0.1939	-0.2772	-0.1488
8	-0.2820	0.1163	0.0887	0.1377	0.0450	0.1708	-0.0409	0.0155	-0.1948	0.0495	-0.0149	0.0171	-0.0065	-0.1120
9	-0.2649	-0.0185	0.0676	-0.1287	-0.0410	0.0875	-0.2497	-0.2462	-0.2259	-0.2331	-0.3630	-0.2448	-0.3370	-0.1190
10	0.1582	-0.2341	-0.0411	0.1423	0.0444	0.0393	0.0312	0.0533	-0.0905	0.0766	-0.0663	-0.0844	-0.0390	0.1486
11	0.3266	-0.0004	0.0395	0.2091	-0.0175	-0.0768	0.4677	0.2264	0.2020	0.2097	0.2284	0.3146	0.1606	0.1723
12	0.0763	0.0585	0.1623	0.1479	-0.1077	0.0782	0.3807	0.3090	0.1969	0.2817	0.1667	0.1693	0.1415	0.1635
13	0.2323	0.3873	0.2377	0.2599	0.4449	0.1541	0.3230	0.3879	0.4000	0.3113	0.3437	0.3282	0.2658	0.2484
14	0.2272	0.1284	0.3815	0.3608	0.1395	0.1832	0.0600	0.2233	0.1887	0.3124	0.1962	0.2445	0.1469	0.0357
15	1.0000	0.1263	0.1947	0.3416	0.2206	0.1532	0.3590	0.1819	0.1392	0.1183	0.1541	0.2075	0.0506	0.1381
16	0.1263	1.0000	0.2816	-0.0035	0.3723	0.3419	0.1582	0.3522	0.0883	0.3701	0.1862	0.1565	0.1414	0.0084
17	0.1947	0.2816	1.0000	0.2774	0.1105	0.2353	0.0841	0.2102	0.2613	0.1999	0.1675	0.0605	0.1902	0.0844
18	0.3416	-0.0035	0.2774	1.0000	-0.1059	0.1010	0.2073	0.2209	0.1899	0.2051	0.2185	0.2361	0.2056	0.1202
19	0.2206	0.3723	0.1105	-0.1059	1.0000	0.3400	0.1444	0.3565	0.1907	0.3918	0.2256	0.2858	0.1437	0.1647
20	0.1532	0.3419	0.2353	0.1010	0.3400	1.0000	0.1091	0.0622	-0.0144	0.0547	-0.0056	-0.0930	-0.0215	0.0916
21	0.3590	0.1582	0.0841	0.2073	0.1444	0.1091	1.0000	0.3452	0.2424	0.3222	0.3364	0.4085	0.2781	0.2987
22	0.1819	0.3522	0.2102	0.2209	0.3565	0.0622	0.3452	1.0000	0.9313	0.9529	0.6071	0.6282	0.5106	0.2533
23	0.1392	0.0883	0.2613	0.1899	0.1907	-0.0194	0.2424	0.9313	1.0000	0.6943	0.6128	0.6165	0.4682	0.3454
24	0.1183	0.3701	0.1999	0.2051	0.3918	0.0547	0.3222	0.9529	0.6943	1.0000	0.5531	0.5281	0.4674	0.1817
25	0.1541	0.1862	0.1675	0.2185	0.2256	-0.0056	0.3364	0.6071	0.6128	0.5531	1.0000	0.8675	0.9267	0.1685
26	0.2075	0.1565	0.0605	0.2361	0.2358	-0.0930	0.4085	0.6282	0.6165	0.5281	0.8675	1.0000	0.5429	0.1686
27	0.0506	0.1414	0.1902	0.2056	0.1437	-0.0215	0.2781	0.5106	0.4682	0.4674	0.9267	0.5429	1.0000	0.1637
28	0.1381	0.0084	0.0844	0.1202	0.1647	0.0916	0.2987	0.2533	0.3454	0.1817	0.1685	0.1686	0.1637	1.0000
29	0.1740	0.0794	-0.0125	0.0641	0.1030	0.1001	0.2783	0.1578	0.2489	0.1066	0.0980	0.1283	0.0858	0.6498
30	0.1290	0.1038	0.0333	0.1875	0.2273	0.0703	0.2195	0.2346	0.3373	0.1267	0.2173	0.3381	0.1006	0.6581
31	0.1349	0.0678	0.0400	0.0835	0.0087	0.1012	0.1428	0.0657	0.0733	0.0457	0.0239	-0.1103	0.0976	0.4403
32	0.0122	-0.0045	0.0196	0.0270	0.1042	0.2167	0.3228	0.0463	0.1695	-0.0659	0.0031	0.1039	-0.0049	0.7286
33	0.0462	-0.0673	0.1315	0.1249	0.1117	-0.0771	0.0859	0.2229	0.2324	0.2270	0.1918	0.1086	0.2021	0.6313
34	0.0721	0.1211	0.2311	0.1663	0.3322	0.0706	0.3175	0.5964	0.6154	0.5672	0.4360	0.4119	0.3738	0.3950
35	0.0801	0.1717	0.0386	0.1516	0.1734	0.1323	0.3220	0.3024	0.3328	0.2731	0.3051	0.3897	0.2595	0.0930

Table 26 – Cont.

	29	30	31	32	33	34	35
1	0.0604	0.1434	-0.0257	-0.0148	0.1186	0.1337	0.1642
2	0.0480	0.1400	-0.0451	-0.0351	0.0856	0.0823	0.0965
3	0.0232	0.0989	-0.0471	-0.0379	0.2533	0.0365	0.0185
4	0.1715	0.1075	0.1241	0.0412	-0.0789	0.2725	0.1195
5	0.0186	0.1418	-0.0558	0.0249	0.0345	0.1914	0.2416
6	0.0710	-0.0156	0.0504	-0.1089	-0.0108	0.0079	-0.0506
7	-0.2181	-0.2876	-0.1250	-0.1455	0.0231	-0.2526	-0.2020
8	-0.1766	-0.2462	-0.0616	-0.1276	0.0573	-0.1474	0.0606
9	-0.1781	-0.2367	-0.1223	-0.0924	-0.0108	-0.2340	-0.3305
10	-0.0299	-0.0076	0.1258	0.0986	0.1951	0.0359	0.1171
11	0.0727	0.0222	0.1491	0.0225	0.2137	0.0900	0.1409
12	0.1405	0.0905	0.1945	0.1132	0.0783	0.2385	0.1242
13	0.2809	0.2362	0.1917	0.0950	0.0987	0.2725	0.2260
14	0.0350	0.0096	0.0051	-0.1520	0.1162	0.1854	0.1580
15	0.1740	0.1290	0.1349	0.0122	0.0462	0.0721	0.0801
16	0.0794	0.1038	0.0678	-0.0045	-0.0673	0.1211	0.1717
17	-0.0125	0.0333	0.0400	0.0196	0.1315	0.2311	0.0386
18	0.0641	0.1875	0.0835	0.0270	0.1249	0.1663	0.1516
19	0.1030	0.2273	0.0087	0.1042	0.1117	0.3322	0.1724
20	0.1001	0.0703	0.1012	0.2167	-0.0771	0.0706	0.1323
21	0.2783	0.2195	0.1428	0.3228	0.0858	0.3175	0.3220
22	0.1578	0.2346	0.0657	0.0463	0.2229	0.5964	0.3024
23	0.2469	0.3373	0.0733	0.1695	0.2324	0.6154	0.3328
24	0.1066	0.1267	0.0457	-0.0659	0.2270	0.5672	0.2731
25	0.0980	0.2173	0.0239	0.0031	0.1918	0.4360	0.3051
26	0.1283	0.3381	-0.1103	0.1039	0.1086	0.4119	0.3897
27	0.0856	0.1006	0.0978	-0.0049	0.2021	0.3738	0.2595
28	0.6468	0.6581	0.4403	0.7286	0.6313	0.3950	0.0930
29	1.0000	0.7189	0.7866	0.4239	-0.0095	0.2807	0.1035
30	0.7189	1.0000	0.1625	0.4912	0.2662	0.3453	0.1569
31	0.7866	0.1625	1.0000	0.2401	-0.0582	0.1176	0.0606
32	0.4239	0.4912	0.2401	1.0000	0.1054	0.2567	0.1084
33	-0.0095	0.2662	-0.0582	0.1054	1.0000	0.2470	-0.0008
34	0.2807	0.3453	0.1176	0.2567	0.2470	1.0000	0.3520
35	0.1035	0.1569	0.0606	0.1084	-0.0008	0.3520	1.0000

TABLE 27

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR WHITE FEMALES: ALL VARIABLES

NUMBER OF CASES = 127

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	0.0658	0.8408
2	41.3874	22.5330
3	7.2518	2.6303
4	39.4781	19.5315
5	6.8696	1.8230
6	0.9231	0.5206
7	4.1890	1.6676
8	1.6063	1.2029
9	1.6220	1.2967
10	1.6031	0.3992
11	101.2756	12.0736
12	2.4808	0.8145
13	22.8969	2.4895
14	2.2885	0.8666
15	3.3048	0.6146
16	22.7545	2.3547
17	2.4310	0.7827
18	3.5263	0.6568
19	21.8966	2.6486
20	2.6378	0.8326
21	3.7350	0.5723
22	5.1625	1.7789
23	5.0000	1.9704
24	5.2735	2.0198
25	54.1614	7.3163
26	53.7446	9.0261
27	54.4464	8.2636
28	3.4713	0.5990
29	4.3110	0.7371
30	3.6210	0.8024
31	4.9606	1.0266
32	3.5556	0.7542
33	2.4016	0.9366
34	14.7480	1.9919
35	53.0088	20.8046

NOTES: 1) The data in Table 27 are based on the full sample of females, including the two schools from which no data were collected for males. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 27 – Cont.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.0000	0.8327	0.8928	0.5970	0.7952	0.1515	-0.2770	-0.1577	-0.1916	-0.0025	0.3934	0.2693	0.2220	0.1753
2	0.8327	1.0000	0.6751	0.4387	0.4308	0.0446	-0.2693	-0.1254	-0.2343	0.0790	0.3885	0.2971	0.1647	0.2013
3	0.8928	0.6751	1.0000	0.5137	0.5626	0.1235	-0.2646	-0.1389	-0.1987	-0.0657	0.3917	0.3106	0.2331	0.1479
4	0.5970	0.4387	0.5137	1.0000	0.5384	0.1567	-0.1446	-0.0042	-0.1583	-0.0119	0.1910	0.1548	0.1889	0.0457
5	0.7952	0.4308	0.5626	0.5384	1.0000	0.1994	-0.2394	-0.1654	-0.1190	0.0013	0.2078	0.1176	0.1516	0.1166
6	0.1515	0.0446	0.1235	0.1567	0.1994	1.0000	-0.0084	0.0253	-0.0187	-0.2074	0.0308	0.0187	0.1479	-0.0656
7	-0.2770	-0.2693	-0.2646	-0.1446	-0.2394	-0.0084	1.0000	0.7188	0.7540	-0.0455	-0.0931	-0.0972	-0.1284	-0.0429
8	-0.1577	-0.1254	-0.1389	-0.0042	-0.1654	0.0253	0.7188	1.0000	0.1125	0.0191	-0.0362	0.0773	-0.0644	-0.0637
9	-0.1916	-0.2343	-0.1987	-0.1583	-0.1190	-0.0187	0.7540	0.1125	1.0000	-0.0682	-0.0850	-0.1560	-0.0575	-0.0064
10	-0.0025	0.0790	-0.0657	-0.0119	0.0013	-0.2074	-0.0455	0.0191	-0.0682	1.0000	-0.0759	0.1345	0.0376	-0.0537
11	0.3934	0.3885	0.3917	0.1910	0.2078	0.0308	-0.0931	-0.0362	-0.0850	-0.0759	1.0000	0.5612	0.2143	-0.0043
12	0.2693	0.2971	0.3106	0.1548	0.1176	0.0187	-0.0972	0.0773	-0.1560	0.1345	0.5612	1.0000	0.1590	-0.0991
13	0.2220	0.1647	0.2331	0.1889	0.1516	0.1479	-0.1284	-0.0644	-0.0575	0.0376	0.2143	0.1590	1.0000	0.1310
14	0.1753	0.2013	0.1479	0.0457	0.1166	-0.0656	-0.0429	-0.0637	-0.0064	-0.0537	-0.0043	-0.0991	0.1310	1.0000
15	0.2253	0.1818	0.1964	0.0768	0.1940	0.2665	-0.1311	-0.0495	-0.1684	0.0228	0.0902	0.0539	0.1435	0.1951
16	0.1674	0.0837	0.1244	0.1868	0.1956	0.1891	0.0229	-0.0033	0.0249	0.0617	0.0355	-0.0017	0.1481	[illegible]
17	0.1455	0.2231	0.0788	0.1441	0.0805	0.1502	-0.0757	-0.0479	-0.0525	-0.2403	0.1273	0.0064	0.1257	[illegible]
18	0.0854	0.0681	0.1044	0.0535	0.0975	0.2986	-0.0113	0.1120	-0.1197	0.0060	0.0622	0.0164	[illegible]	0.0274
19	0.1238	0.1403	0.0951	0.2012	0.0965	0.1420	-0.0365	-0.0948	0.0259	-0.0371	0.2021	-0.0216	[illegible]	[illegible]
20	0.1698	0.1292	0.1065	0.1126	0.2234	0.1466	-0.1139	-0.0246	-0.1205	-0.1207	0.1458	0.1052	0.3184	[illegible]
21	0.0978	0.0556	0.1662	0.0634	0.0090	-0.0152	-0.1607	-0.1251	-0.1462	-0.1051	0.3272	0.0957	0.1147	[illegible]
22	0.5086	0.3925	0.5211	0.3447	0.4015	0.1190	-0.1310	-0.1369	-0.0275	0.0520	0.4156	0.3367	[illegible]	[illegible]
23	0.5887	0.4850	0.5740	0.2536	0.4375	0.0426	-0.1297	-0.0819	-0.0734	0.0617	0.4804	0.3575	[illegible]	[illegible]
24	0.3759	0.2638	0.3864	0.2745	0.3706	0.1459	-0.1373	-0.1945	0.0093	0.0881	0.3801	0.2331	[illegible]	[illegible]
25	0.1833	0.1485	0.2013	0.0698	0.0662	0.1473	0.0187	-0.0280	0.0510	-0.0276	0.5044	0.2946	0.3167	-0.0240
26	0.1155	0.1137	0.0700	0.0148	0.1142	0.1275	-0.0348	-0.1371	0.0683	0.1245	0.4084	0.2461	0.3602	[illegible]
27	0.1975	0.1634	0.2676	0.0625	0.0397	0.1320	0.0165	0.0174	0.0134	-0.0625	0.4729	0.2606	0.3135	[illegible]
28	0.4669	0.4389	0.4695	0.2748	0.2938	0.1360	-0.0070	0.0319	-0.0012	0.0398	0.5109	0.2784	0.2241	[illegible]
29	0.3248	0.2785	0.3449	0.2704	0.2162	0.0428	-0.0402	0.0363	-0.0587	-0.0600	0.3451	0.2317	0.2057	[illegible]
30	0.3442	0.3391	0.3561	0.2065	0.1925	0.0189	-0.0742	-0.0906	0.0095	0.1496	0.2502	0.1012	0.2345	[illegible]
31	0.1879	0.1203	0.2037	0.2146	0.1658	0.0430	0.0246	0.1159	-0.0411	-0.1139	0.3223	[illegible]	[illegible]	[illegible]
32	0.1848	0.2148	0.1982	0.0106	0.0524	0.0444	0.0717	0.0244	0.0906	-0.0294	0.3991	0.2517	0.1516	[illegible]
33	0.4556	0.4502	0.4670	0.3119	0.3484	0.1964	-0.0301	0.0146	-0.0309	0.1494	0.3474	0.1193	0.1576	[illegible]
34	0.4412	0.3763	0.2806	0.3303	0.3708	0.0426	-0.0916	-0.0583	-0.0433	0.0070	0.4676	0.3595	0.2467	[illegible]
35	0.1852	0.0425	0.2268	0.2278	0.1994	-0.1521	-0.0671	-0.0558	-0.0636	-0.0144	0.2367	0.1293	0.2024	0.1445

Table 27 – Cont.

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	0.2253	0.1674	0.1455	0.0854	0.1238	0.1696	0.0978	0.5088	0.5887	0.3759	0.1803	0.1156	0.1935	0.4689
2	0.1818	0.0837	0.2211	0.0631	0.1403	0.1293	0.0556	0.3925	0.4850	0.2638	0.1489	0.1137	0.1634	0.4389
3	0.1964	0.1244	0.0788	0.1044	0.0951	0.1065	0.1662	0.5211	0.5740	0.3864	0.2013	0.0700	0.2676	0.4695
4	0.0768	0.1868	0.1441	0.0535	0.2012	0.1126	0.0634	0.3447	0.3536	0.2798	0.0688	0.0148	0.0625	0.2748
5	0.1940	0.1986	0.0805	0.0975	0.0985	0.2234	0.0090	0.4015	0.4375	0.3206	0.0862	0.1142	0.0397	0.2928
6	0.2665	0.1891	0.1502	0.2986	0.1420	0.1466	-0.0152	0.1190	0.0426	0.1459	0.1473	0.1275	0.1320	0.1360
7	-0.1311	0.0229	-0.0757	-0.0113	-0.0365	-0.1139	-0.1607	-0.1310	-0.1297	-0.1373	0.0187	-0.0348	0.0165	-0.0020
8	-0.0455	-0.0033	-0.0479	0.1120	-0.0948	-0.0246	-0.1251	-0.1369	-0.0819	-0.1945	-0.0280	-0.1331	0.0174	0.0319
9	-0.1884	0.0248	-0.0825	-0.1197	0.0259	-0.1205	-0.1462	-0.0275	-0.0734	0.0093	0.0510	0.0633	0.0139	-0.0012
10	0.0225	0.0612	-0.2403	0.0060	-0.0871	-0.1207	-0.1051	0.0528	0.0617	0.0981	-0.0278	0.1245	-0.0626	0.0398
11	0.0902	0.0355	0.1223	0.0623	0.2021	0.1458	0.3222	0.4586	0.4804	0.3801	0.5044	0.4084	0.4629	0.5109
12	0.0538	-0.0012	0.0064	0.0168	-0.0266	0.1052	0.0967	0.3397	0.3575	0.2531	0.2986	0.2961	0.2606	0.2784
13	0.1905	0.1481	0.1257	0.0824	0.2701	0.3184	0.1147	0.2579	0.2887	0.1951	0.3867	0.3592	0.3130	0.2241
14	0.1961	0.1453	0.1240	0.0274	0.2289	0.0659	0.0144	0.1110	0.0457	0.1448	-0.0340	-0.0265	-0.0263	0.1270
15	1.0000	0.2708	0.1435	0.1341	0.2156	0.3296	0.1429	0.2002	0.2578	0.0938	0.2170	0.2882	0.1073	0.0711
16	0.2708	1.0000	0.0985	0.1885	0.2484	0.1224	0.1738	0.1016	0.0577	0.1364	0.2443	0.1538	0.2687	0.1557
17	0.1435	0.0985	1.0000	0.1359	0.2612	0.3041	0.0888	0.1287	0.1058	0.1267	0.1024	0.0700	0.1167	0.0891
18	0.1341	0.1885	0.1359	1.0000	0.0590	0.1457	0.0313	0.1415	0.0390	0.1503	0.1054	-0.0020	0.2052	0.0691
19	0.2156	0.2484	0.2612	0.0590	1.0000	0.3871	0.1564	0.2329	0.1369	0.2978	0.3112	0.2863	0.2714	0.2103
20	0.3296	0.1224	0.3041	0.1457	0.3871	1.0000	0.2542	0.1247	0.1573	0.0959	0.1261	0.1420	0.0716	0.0803
21	0.1429	0.1738	0.0888	0.0313	0.1564	0.2542	1.0000	0.1337	0.1457	0.1443	0.3310	0.2237	0.3137	0.1221
22	0.2002	0.1016	0.1287	0.1415	0.2329	0.1247	0.1337	1.0000	0.8781	0.8988	0.4808	0.3865	0.4706	0.6832
23	0.2578	0.0577	0.1058	0.0390	0.1369	0.1573	0.1457	0.8781	1.0000	0.5489	0.4553	0.3406	0.4432	0.5729
24	0.0938	0.1364	0.1267	0.1503	0.2978	0.0959	0.1443	0.8988	0.5489	1.0000	0.4208	0.3394	0.4145	0.6345
25	0.2170	0.2443	0.1024	0.1054	0.3112	0.1261	0.3310	0.4808	0.4553	0.4208	1.0000	0.8693	0.8612	0.4613
26	0.2882	0.1538	0.0700	-0.0020	0.2863	0.1420	0.2237	0.3865	0.3406	0.3394	0.8693	1.0000	0.4735	0.3274
27	0.1073	0.2687	0.1167	0.2052	0.2714	0.0716	0.3137	0.4706	0.4432	0.4145	0.8612	0.4735	1.0000	0.4930
28	0.0711	0.1557	0.0891	0.0691	0.2103	0.0803	0.1221	0.6832	0.5729	0.6345	0.4613	0.3274	0.4930	1.0000
29	-0.1850	0.1210	0.0714	0.0239	0.1315	0.0298	0.1094	0.5284	0.4235	0.5052	0.3957	0.2506	0.4596	0.7359
30	0.0413	0.1897	0.0869	0.0202	0.1269	-0.0128	0.0731	0.5719	0.5411	0.5131	0.4465	0.3822	0.4258	0.6459
31	-0.2799	0.0310	0.0185	0.0294	0.0739	0.0482	0.0618	0.3114	0.1871	0.3242	0.2005	0.0576	0.3106	0.5391
32	-0.0081	0.0537	0.0704	0.0821	0.1288	0.0000	0.0878	0.4048	0.2733	0.4094	0.2882	0.2069	0.3150	0.7088
33	0.2779	0.1584	0.0617	0.0553	0.1993	0.1269	0.0779	0.5662	0.5546	0.4812	0.3469	0.2703	0.3345	0.7689
34	0.1475	0.1223	0.1836	0.0342	0.2946	0.2173	0.1965	0.7050	0.5815	0.6825	0.4631	0.3419	0.4685	0.6329
35	0.0405	0.1578	-0.0169	-0.0902	0.2444	0.1211	0.2367	0.4797	0.4581	0.3625	0.2332	0.0840	0.2900	0.3656

Table 27 – Cont.

	29	30	31	32	33	34	35
1	0.324[illegible]	0.3442	0.1879	0.1848	0.4958	0.4412	0.1882
2	0.2785	0.3391	0.1203	0.2148	0.4502	0.3763	0.0425
3	0.3449	0.3561	0.2037	0.1982	0.4670	0.3806	0.2268
4	0.2704	0.2065	0.2146	0.0106	0.3119	0.3303	0.2278
5	0.2162	0.1925	0.1658	0.0524	0.3484	0.3708	0.1994
6	0.0428	0.0189	0.0430	0.0444	0.1964	0.0426	-0.1521
7	-0.0402	-0.0742	0.0246	0.0717	-0.0301	-0.0916	-0.0671
8	0.0363	-0.0996	0.1159	0.0244	0.0146	-0.0583	-0.0558
9	-0.0587	0.0085	-0.0411	0.0906	-0.0309	-0.0433	-0.0636
10	-0.0400	0.1496	-0.1159	-0.0294	0.1494	0.0070	-0.0144
11	0.3951	0.2902	0.3223	0.3991	0.3474	0.4676	0.2367
12	0.2317	0.1012	0.2605	0.2817	0.1183	0.3555	0.1393
13	0.7037	0.2748	0.0682	0.1516	0.1560	0.2967	0.2029
14	0.1913	0.1791	0.1326	0.0867	0.0239	0.0783	0.1355
15	-0.1650	0.0413	-0.2749	-0.0081	0.2779	0.1475	0.0405
16	0.1210	0.1847	0.0310	0.0537	0.1584	0.1223	0.1578
17	0.0714	0.0869	0.0185	0.0704	0.0617	0.1836	-0.0169
18	0.0239	0.0202	0.0294	0.0821	0.0553	0.0342	-0.0902
19	0.1315	0.1269	0.0739	0.1288	0.1993	0.2946	0.2444
20	0.0298	-0.0128	0.0482	0.0000	0.1269	0.2173	0.1211
21	0.1094	0.0731	0.0618	0.0878	0.0779	0.1965	0.2367
22	0.5784	0.5719	0.3114	0.4048	0.5662	0.7050	0.4797
23	0.4725	0.5411	0.1821	0.2733	0.5546	0.5815	0.4581
24	0.5647	0.5131	0.2242	0.4094	0.4612	0.6825	0.3625
25	0.3457	0.4465	0.2005	0.2882	0.3469	0.4631	0.2332
26	0.2506	0.3822	0.0526	0.2069	0.2703	0.3419	0.0840
27	0.4596	0.4258	0.3106	0.3150	0.3345	0.4685	0.2900
28	0.7357	0.6459	0.5391	0.7088	0.7689	0.6329	0.3656
29	1.0000	0.7195	0.8343	0.3629	0.3292	0.5186	0.3435
30	0.7195	1.0000	0.2323	0.3064	0.4323	0.4511	0.2293
31	0.8343	0.2323	1.0000	0.2889	0.1404	0.3910	0.3143
32	0.3629	0.3064	0.2889	1.0000	0.2737	0.4185	0.1803
33	0.3292	0.4323	0.1404	0.2737	1.0000	0.4673	0.2568
34	0.5186	0.4511	0.3910	0.4185	0.4673	1.0000	0.4031
35	0.3435	0.2293	0.3143	0.1803	0.2568	0.4031	1.0000

TABLE 28

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR ALL FEMALES: ALL VARIABLES

NUMBER OF CASES = 246

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	-0.0745	0.7906
2	34.6713	22.1564
3	6.9844	2.4363
4	34.8555	19.0104
5	6.8231	1.7729
6	1.0566	0.9422
7	4.6341	2.3811
8	1.7642	1.4204
9	1.9187	1.6649
10	1.6789	0.4674
11	96.1020	12.4552
12	2.3801	0.8307
13	23.2914	2.5809
14	7.4569	0.9646
15	3.3287	0.6861
16	23.0684	2.6846
17	2.6857	0.9516
18	3.4771	0.7174
19	22.2982	3.0112
20	2.8939	0.9216
21	3.6478	0.6309
22	5.6560	2.1453
23	5.6360	2.3355
24	5.6333	2.2486
25	54.6192	7.9427
26	54.1861	9.1014
27	55.2939	8.7670
28	3.5417	0.6029
29	4.4797	0.7848
30	3.7261	0.8404
31	5.1179	1.0254
32	3.5842	0.7808
33	2.5610	0.9785
34	15.3740	2.3331
35	54.8489	21.1866
36	1.5163	0.5008

NOTES: 1) The data in Table 28 are based on the full sample of females, including the two schools from which no data were collected for males. 2) Varible numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 28 – Cont.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.0000	0.7946	0.6450	0.4510	0.7809	0.0898	-0.2697	-0.1670	-0.2234	-0.0238	0.3506	0.2574	0.1251	0.0740
2	0.7946	1.0000	0.5645	0.3629	0.3387	-0.0506	-0.2553	-0.1453	-0.2451	0.0852	0.4187	0.2544	0.0273	-0.0752
3	0.6450	0.5645	1.0000	0.3514	0.4739	0.0836	-0.1917	-0.1472	-0.1308	-0.0892	0.3059	0.2361	0.1368	0.0861
4	0.4510	0.3629	0.3514	1.0000	0.4531	0.1702	-0.1808	-0.0436	-0.2039	0.0225	0.2394	0.0907	0.1298	-0.1111
5	0.7809	0.3387	0.4739	0.4531	1.0000	0.1393	-0.2828	-0.1758	-0.2284	-0.0408	0.2195	0.1494	0.1433	0.1079
6	0.0898	-0.0506	0.0836	0.1702	0.1393	1.0000	-0.0098	0.0101	-0.0256	-0.2103	0.0114	-0.0296	0.1074	0.0757
7	-0.2697	-0.2553	-0.1917	-0.1808	-0.2828	-0.0098	1.0000	0.7335	0.8032	-0.0509	-0.2194	-0.0625	-0.1797	0.0133
8	-0.1670	-0.1453	-0.1472	-0.0436	-0.1758	0.0101	0.7335	1.0000	0.2094	0.0269	-0.0826	0.0263	-0.0726	0.0146
9	-0.2234	-0.2451	-0.1308	-0.2039	-0.2284	-0.0256	0.8032	0.2094	1.0000	-0.0913	-0.2370	-0.1076	-0.1198	0.0434
10	-0.0238	0.0852	-0.0892	0.0225	-0.0408	-0.2103	-0.0509	0.0269	-0.0913	1.0000	0.1616	0.1548	0.0122	-0.1059
11	0.3506	0.4187	0.3059	0.2394	0.2195	0.0114	-0.2194	-0.0826	-0.2370	0.1616	1.0000	0.4914	0.1089	-0.0791
12	0.2574	0.2544	0.2361	0.0907	0.1494	-0.0296	-0.0625	0.0263	-0.1076	0.1548	0.4914	1.0000	0.0514	-0.0723
13	0.1251	0.0273	0.1368	0.1298	0.1433	0.1074	-0.1797	-0.0726	-0.1198	0.0122	0.1089	0.0514	1.0000	0.2461
14	0.0740	-0.0752	0.0861	-0.1111	0.1079	0.0757	0.0133	0.0146	0.0434	-0.1059	-0.0791	-0.0725	0.2461	1.0000
15	0.1921	0.1070	0.1764	0.0305	0.1870	0.2639	-0.2197	-0.1476	-0.1774	0.0816	0.1442	0.0523	0.2137	0.2141
16	0.0619	0.0370	0.0756	0.2134	0.1428	0.0918	0.0485	0.0660	0.0201	-0.1321	-0.0472	0.0041	0.2276	0.1715
17	0.0401	0.0173	0.0427	0.0634	0.0594	0.0412	0.0828	0.0535	0.0695	-0.1974	-0.0729	0.0271	0.2147	0.2017
18	0.1216	0.0193	0.0960	0.0561	0.1564	0.2355	-0.0521	0.1174	-0.1363	0.0986	0.1915	0.0960	0.1341	0.2447
19	-0.0806	0.0201	-0.0646	0.0774	-0.0561	0.0270	0.0052	-0.0002	0.0061	-0.0530	0.0230	-0.2425	0.3143	0.2242
20	-0.0275	-0.0420	-0.0434	-0.0510	0.0611	0.0324	0.0902	0.1186	0.0580	-0.1081	-0.0891	0.0501	0.2963	0.1921
21	0.2013	0.1944	0.1384	0.0270	0.1373	-0.0376	-0.2178	-0.0899	-0.2301	0.0148	0.4067	0.2601	0.1702	0.0694
22	0.2849	0.1357	0.2072	0.2406	0.3090	0.0863	-0.1659	-0.0279	-0.1079	-0.0117	0.1690	0.2507	0.2869	0.2362
23	0.3278	0.1337	0.3565	0.1705	0.3258	0.1047	-0.1422	-0.0941	-0.0040	-0.0677	0.1762	0.1404	0.3799	[illegible]
24	0.2530	0.1126	0.2469	0.2563	0.2865	0.0796	-0.1021	-0.0503	-0.0976	0.0301	0.1713	0.2163	0.2702	0.2249
25	0.1777	0.0013	0.1535	0.1669	0.1766	0.1040	-0.1286	-0.0119	-0.1700	-0.0713	0.2270	0.2127	0.3072	0.0054
26	0.1270	0.0574	0.0876	0.0709	0.1688	0.1246	-0.0910	-0.0646	-0.0634	0.0162	0.3135	0.2284	0.2188	0.1722
27	0.1705	0.0943	0.1753	0.1680	0.1313	0.0919	-0.1168	0.0160	-0.1594	-0.0766	0.2956	0.1765	0.3126	0.0622
28	0.2571	0.1853	0.2014	0.1159	0.1659	0.1072	-0.0410	-0.0214	-0.0268	0.0344	0.2319	0.1902	0.2731	0.1824
29	0.1524	0.1025	0.1814	0.1347	0.1105	0.0918	-0.0957	-0.0574	-0.0925	-0.1069	0.1198	0.1514	0.2416	0.1366
30	0.2294	0.1878	0.2224	0.1204	0.1653	0.0752	-0.1667	-0.1593	-0.1092	0.0256	0.0927	0.1744	0.2019	0.1093
31	0.0625	-0.0063	0.0820	0.1334	0.0584	0.0702	-0.0274	0.0360	-0.0547	-0.0314	0.1621	0.2037	0.1974	0.1127
32	0.0050	0.0832	0.0907	0.0323	0.0384	-0.0132	-0.0469	-0.0562	-0.0067	0.0271	0.1910	0.1894	0.1409	0.0247
33	0.2608	0.2024	0.3317	0.0749	0.1890	0.1159	0.0341	0.0574	0.0131	0.1187	0.1796	0.0754	0.1936	0.1372
34	0.2164	0.1187	0.1770	0.2204	0.2556	0.0699	-0.1281	-0.0755	-0.1036	-0.0541	0.1179	0.2274	0.2314	0.2142
35	0.1527	0.0241	0.1181	0.1365	0.2150	-0.0841	-0.1283	0.0219	-0.2017	0.0328	0.1343	0.1151	0.2364	0.2066
36	0.1637	0.3281	0.1194	0.2314	0.0273	-0.1576	-0.1938	-0.1151	-0.1845	0.2750	0.4318	0.1257	-0.2055	-0.2135

Table 28 – Cont.

	15	16	17	18	19	20	21	22	23	24	25	26	27	28
1	0.1921	0.0819	0.0401	0.1216	-0.0806	-0.0275	0.2013	0.2848	0.3278	0.2530	0.1777	0.1270	0.1705	0.2571
2	0.1070	0.0370	0.0173	0.0192	0.0281	-0.0420	0.1944	0.1357	0.1337	0.1126	0.0813	0.0564	0.0943	0.1853
3	0.1769	0.0756	0.0437	0.0960	-0.0636	-0.0434	0.1384	0.3072	0.3565	0.2499	0.1535	0.0876	0.1753	0.3014
4	0.0305	0.2134	0.0034	0.0581	0.0774	-0.0510	0.0270	0.2406	0.1705	0.2563	0.1669	0.0704	0.1680	0.1159
5	0.1870	0.1428	0.0544	0.1584	-0.0561	0.0611	0.1373	0.3040	0.3258	0.2885	0.1786	0.1688	0.1313	0.1659
6	0.2639	0.0916	0.0412	0.2355	0.0270	0.0334	-0.0376	0.0863	0.1047	0.0796	0.1040	0.1246	0.0919	0.1072
7	-0.2147	0.0485	0.0828	-0.0521	0.0062	0.0902	-0.2178	-0.1059	-0.1422	-0.1021	-0.1386	-0.0910	-0.1168	-0.0410
8	-0.1476	0.0560	0.0535	0.1174	-0.0002	0.1186	-0.0899	-0.0278	-0.0941	-0.0503	-0.0119	-0.0646	0.0160	-0.0214
9	-0.1774	0.0201	0.0695	-0.1363	0.0061	0.0580	-0.2301	-0.1079	-0.0940	-0.0939	-0.1708	-0.0639	-0.1599	-0.0268
10	0.0816	-0.1321	-0.1974	0.0588	-0.0530	-0.1081	0.0148	-0.0187	-0.0677	0.0301	-0.0713	0.0162	-0.0766	0.0344
11	0.1442	-0.0472	-0.0729	0.1515	0.0230	-0.0891	0.4067	0.1699	0.1762	0.1710	0.2870	0.3139	0.2359	0.2319
12	0.0523	0.0041	0.0221	0.0960	-0.0925	0.0501	0.2601	0.2507	0.1909	0.2160	0.2122	0.2284	0.1765	0.1902
13	0.2117	0.2276	0.2197	0.1341	0.3643	0.2963	0.1702	0.3563	0.3749	0.2705	0.3871	0.3588	0.3136	0.2731
14	0.2163	0.1716	0.3013	0.1453	0.2292	0.1921	0.0004	0.2362	0.2003	0.2598	0.0990	0.1022	0.0922	0.1624
15	1.0000	0.2147	0.1732	0.2250	0.2348	0.2546	0.2408	0.1957	0.2085	0.1108	0.1924	0.2533	0.0875	0.1055
16	0.2147	1.0000	0.2290	0.0838	0.3221	0.2633	0.1455	0.2662	0.0800	0.2784	0.2272	0.1682	0.2170	0.1148
17	0.1732	0.2290	1.0000	0.1809	0.2058	0.3294	0.0295	0.2389	0.2713	0.2113	0.1585	0.0805	0.1805	0.1495
18	0.2250	0.0838	0.1809	1.0000	-0.0416	0.0960	0.1363	0.1590	0.0924	0.1593	0.1570	0.0928	0.1963	0.0700
19	0.2348	0.3221	0.2058	-0.0416	1.0000	0.3818	0.1292	0.3238	0.2134	0.3628	0.2762	0.2950	0.2178	0.2064
20	0.2546	0.2633	0.3294	0.0960	0.3818	1.0000	0.1209	0.1552	0.1667	0.1208	0.0814	0.0612	0.0546	0.1386
21	0.2408	0.1455	0.0295	0.1363	0.1292	0.1209	1.0000	0.1979	0.1370	0.1989	0.3133	0.2909	0.2727	0.1764
22	0.1957	0.2662	0.2389	0.1590	0.3238	0.1552	0.1979	1.0000	0.9147	0.9290	0.5531	0.4844	0.4992	0.4935
23	0.2085	0.0800	0.2713	0.0924	0.2134	0.1667	0.1370	0.9147	1.0000	0.6360	0.5297	0.4523	0.4709	0.5256
24	0.1108	0.2784	0.2113	0.1593	0.3628	0.1208	0.1989	0.9290	0.6360	1.0000	0.4967	0.4168	0.4510	0.4416
25	0.1924	0.2272	0.1585	0.1570	0.2762	0.0814	0.3133	0.5531	0.5297	0.4967	1.0000	0.8758	0.8958	0.3337
26	0.2533	0.1682	0.0805	0.0928	0.2950	0.0612	0.2909	0.4844	0.4523	0.4168	0.8758	1.0000	0.5027	0.2765
27	0.0875	0.2170	0.1805	0.1963	0.2178	0.0546	0.2727	0.4992	0.4709	0.4510	0.8958	0.5027	1.0000	0.3554
28	0.1055	0.1148	0.1495	0.0700	0.2064	0.1386	0.1764	0.4935	0.5256	0.4416	0.3337	0.2765	0.3554	1.0000
29	-0.0127	0.1246	0.0974	0.0236	0.1394	0.1271	0.1361	0.3656	0.3915	0.3293	0.2565	0.2125	0.2881	0.7063
30	0.0855	0.1659	0.1070	0.0899	0.1697	0.0657	0.1278	0.4223	0.4743	0.3526	0.3522	0.3688	0.2956	0.6594
31	-0.0979	0.0729	0.0763	0.0416	0.0564	0.1179	0.0783	0.2143	0.1778	0.2102	0.1273	0.0017	0.2224	0.5087
32	0.0077	0.0332	0.0623	0.0499	0.1146	0.1189	0.2039	0.2336	0.2524	0.1913	0.1579	0.1744	0.1720	0.7096
33	0.1832	0.0696	0.1456	0.0744	0.1735	0.0657	0.0559	0.4074	0.4711	0.3704	0.2793	0.2176	0.2817	0.7103
34	0.1189	0.1617	0.2797	0.0798	0.3415	0.2024	0.2138	0.6673	0.6440	0.6350	0.4533	0.3707	0.4281	0.5296
35	0.0618	0.1730	0.0348	0.0311	0.2115	0.1459	0.2647	0.3807	0.4130	0.3193	0.2754	0.2183	0.2784	0.2371
36	-0.0459	-0.1375	-0.2980	0.0763	-0.1426	-0.2889	0.1432	-0.2551	-0.3590	-0.1799	-0.0916	-0.0626	-0.1073	-0.2067

Table 28 – Cont.

	29	30	31	32	33	34	35	36
1	0.1524	0.2254	0.0629	0.0650	0.2806	0.2164	0.1527	0.1837
2	0.1025	0.1878	-0.0063	0.0832	0.2074	0.1187	0.0241	0.3281
3	0.1814	0.2224	0.0820	0.0907	0.3367	0.1770	0.1181	0.1194
4	0.1347	0.1204	0.1336	0.0323	0.0749	0.2204	0.1365	0.2384
5	0.1105	0.1653	0.0584	0.0384	0.1890	0.2556	0.2150	0.0273
6	0.0918	0.0252	0.0702	-0.0132	0.1189	0.0699	-0.0841	-0.1576
7	-0.0557	-0.1667	-0.0274	-0.0469	0.0341	-0.1281	-0.1283	-0.1935
8	-0.0574	-0.1593	0.0360	-0.0562	0.0574	-0.0755	0.0215	-0.1151
9	-0.0825	-0.1042	-0.0542	-0.0097	0.0131	-0.1036	-0.2017	-0.1845
10	-0.1068	0.0286	-0.0314	0.0271	0.1187	-0.0541	0.0338	0.2750
11	0.1198	0.0967	0.1521	0.1910	0.1786	0.1179	0.1343	0.4318
12	0.1514	0.0788	0.2037	0.1883	0.0754	0.2374	0.1151	0.1257
13	0.2616	0.2819	0.1374	0.1487	0.1838	0.3314	0.2369	-0.2055
14	0.1768	0.1503	0.1182	0.0247	0.1372	0.2062	0.2064	-0.2878
15	-0.0127	0.0855	-0.0979	0.0077	0.1832	0.1189	0.0618	-0.0459
16	0.1296	0.1654	0.0729	0.0332	0.0690	0.1617	0.1730	-0.1375
17	0.0974	0.1070	0.0763	0.0623	0.1456	0.2797	0.0348	-0.2980
18	0.0238	0.0699	0.0416	0.0499	0.0744	0.0798	0.0311	0.0763
19	0.1394	0.1847	0.0564	0.1146	0.1735	0.3415	0.2115	-0.1426
20	0.1271	0.0657	0.1179	0.1189	0.0657	0.2024	0.1459	-0.2889
21	0.1361	0.1278	0.0783	0.2039	0.0559	0.2138	0.2647	0.1432
22	0.3056	0.4223	0.2143	0.2336	0.4074	0.6673	0.3907	-0.2551
23	0.2915	0.4743	0.1776	0.2524	0.4711	0.6440	0.4130	-0.3590
24	0.2043	0.3528	0.2162	0.1913	0.3704	0.6350	0.3193	-0.1709
25	0.2515	0.3527	0.1273	0.1579	0.2793	0.4533	0.2754	-0.0916
26	0.2125	0.3666	0.0017	0.1744	0.2176	0.3707	0.2183	-0.0626
27	0.2881	0.2956	0.2224	0.1720	0.2817	0.4281	0.2784	-0.1073
28	0.7063	0.6594	0.5087	0.7096	0.7103	0.5296	0.2371	-0.2067
29	1.0000	0.7247	0.8145	0.3945	0.1850	0.4221	0.2284	-0.2225
30	0.7247	1.0000	0.2147	0.4010	0.3676	0.4115	0.2032	-0.1356
31	0.2145	0.2147	1.0000	0.2682	0.0681	0.2750	0.1946	-0.1588
32	0.3945	0.4010	0.2682	1.0000	0.1935	0.3274	0.1446	-0.0452
33	0.1850	0.3676	0.0681	0.1935	1.0000	0.3726	0.1314	-0.1686
34	0.4221	0.4115	0.2750	0.3274	0.3726	1.0000	0.3794	-0.2777
35	0.2284	0.2032	0.1946	0.1446	0.1314	0.3794	1.0000	-0.0874
36	-0.2225	-0.1356	-0.1588	-0.0452	-0.1686	-0.2777	-0.0874	1.0000

TABLE 29

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR BLACK FEMALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 107

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	-0.2216	0.7134
2	27.1649	19.5710
3	6.6363	2.0551
4	30.6807	17.3710
5	6.7671	1.7457
7	5.2336	2.7833
8	2.0374	1.6190
9	2.2243	1.4795
10	1.5514	0.4997
11	91.1308	10.1043
12	2.3253	0.8065
22	6.4138	2.4175
23	6.7222	2.5433
24	6.3012	2.4531
25	55.9124	8.7676
26	55.0455	9.5535
27	56.5053	9.4085
28	3.6441	0.5846
29	4.6168	0.7604
30	2.8333	0.8786
31	5.2430	0.9890
32	3.5534	0.8011
33	2.7664	0.9960
34	15.9813	2.5215
35	57.1069	21.2795

NOTES: 1) The data in Table 29 are based on the subset of 12 schools for which data was gethered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 29 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.7400	0.7607	0.3457	0.7779	-0.2652	-0.1864	-0.2322	-0.2041	0.2549	0.1831	0.1396	0.0934	0.1767
2	0.7400	1.0000	0.4269	0.1208	0.2153	-0.2231	-0.1284	-0.2420	-0.1024	0.2331	0.1472	0.0074	-0.0617	0.0160
3	0.7607	0.4269	1.0000	0.1279	0.3093	-0.0893	-0.1277	-0.0181	-0.2094	0.1183	0.0234	0.1023	0.1502	0.1091
4	0.3457	0.1208	0.1279	1.0000	0.4032	-0.1904	-0.0680	-0.2021	-0.0699	0.0865	-0.0648	0.3578	0.3237	0.3667
5	0.7779	0.2153	0.3093	0.4032	1.0000	-0.3754	-0.2354	-0.3507	-0.1397	0.2426	0.1679	0.2405	0.1848	0.2725
7	-0.2652	-0.2231	-0.0893	-0.1904	-0.3754	1.0000	0.7433	0.8246	-0.0121	-0.3100	-0.0551	-0.2413	-0.3311	-0.2031
8	-0.1864	-0.1284	-0.1277	-0.0680	-0.2354	0.7433	1.0000	0.2389	0.0326	-0.1445	-0.0468	-0.0730	-0.2384	-0.0294
9	-0.2322	-0.2420	-0.0181	-0.2021	-0.3507	0.8246	0.2389	1.0000	-0.0610	-0.3349	-0.0408	-0.2653	-0.2533	-0.2479
10	-0.2041	-0.1024	-0.2094	-0.0699	-0.1397	-0.0121	0.0326	-0.0610	1.0000	0.1799	0.0762	-0.0131	-0.1480	0.0283
11	0.2549	0.2331	0.1183	0.0865	0.2426	-0.3100	-0.1445	-0.3349	0.1799	1.0000	0.3761	0.1919	0.2086	0.1703
12	0.1831	0.1472	0.0234	-0.0648	0.1679	-0.0551	-0.0468	-0.0408	0.0762	0.3761	1.0000	0.2629	0.1089	0.2490
22	0.1396	0.0074	0.1023	0.3578	0.2405	-0.2413	-0.0730	-0.2653	-0.0131	0.1919	0.2629	1.0000	0.9397	0.9580
23	0.0934	-0.0617	0.1502	0.3237	0.1848	-0.3311	-0.2384	-0.2533	-0.1480	0.2086	0.1089	0.9397	1.0000	0.7290
24	0.1767	0.0160	0.1091	0.3667	0.2725	-0.2031	-0.0294	-0.2479	0.0283	0.1703	0.2490	0.9580	0.7290	1.0000
25	0.2400	0.0800	0.1284	0.3604	0.3211	-0.3298	-0.0731	-0.3738	-0.1342	0.2409	0.1411	0.6120	0.6336	0.5692
26	0.2056	0.0267	0.1607	0.3331	0.3005	-0.2241	-0.0144	-0.2803	-0.1249	0.3270	0.1547	0.6430	0.6312	0.5554
27	0.2192	0.1164	0.0871	0.3726	0.2746	-0.2951	-0.0545	-0.3440	-0.1016	0.1758	0.1329	0.5200	0.4986	0.4917
28	0.0726	0.0764	0.1356	0.0356	-0.0064	-0.1417	-0.1096	-0.1174	0.1507	0.1961	0.2054	0.2837	0.3575	0.2418
29	0.0275	0.0894	-0.0346	0.1463	-0.0363	-0.1958	-0.1645	-0.1563	0.0151	0.0649	0.2371	0.2016	0.2576	0.1566
30	0.1346	0.1563	0.0922	0.0488	0.1248	-0.2794	-0.2500	-0.2090	-0.0081	0.0278	0.1066	0.2629	0.3790	0.1558
31	-0.0646	-0.0095	-0.1228	0.1516	-0.1109	-0.1031	-0.0529	-0.1129	0.1845	0.1478	0.2481	0.0883	0.0450	0.0877
32	-0.0552	-0.0291	-0.1012	0.0755	-0.0191	-0.1421	-0.1021	-0.1173	0.1092	0.0443	0.1797	0.0859	0.1691	0.0015
33	0.1357	0.0975	0.3093	-0.1112	0.0350	0.0029	0.0230	-0.0167	0.1476	0.2487	0.0314	0.2182	0.2486	0.2420
34	0.1214	0.1011	-0.0044	0.2791	0.1812	-0.2548	-0.1315	-0.2531	0.0307	0.1264	0.2445	0.6557	0.6336	0.6350
35	0.1624	0.1100	0.0075	0.1630	0.2469	-0.2060	0.0237	-0.3360	0.0962	0.1548	0.1297	0.2835	0.3333	0.2652

	25	26	27	28	29	30	31	32	33	34	35
1	0.2400	0.2056	0.2192	0.0726	0.0275	0.1346	-0.0646	-0.0552	0.1357	0.1214	0.1624
2	0.0800	0.0267	0.1164	0.0764	0.0894	0.1563	-0.0095	-0.0291	0.0975	0.1011	0.1100
3	0.1284	0.1607	0.0871	0.1356	-0.0346	0.0922	-0.1228	-0.1012	0.3093	-0.0044	0.0075
4	0.3604	0.3331	0.3726	0.0356	0.1463	0.0488	0.1516	0.0755	-0.1112	0.2791	0.1630
5	0.3211	0.3005	0.2746	-0.0064	-0.0363	0.1248	-0.1109	-0.0191	0.0350	0.1812	0.2469
7	-0.3298	-0.2241	-0.2951	-0.1417	-0.1958	-0.2794	-0.1031	-0.1421	0.0029	-0.2548	-0.2060
8	-0.0731	-0.0144	-0.0545	-0.1096	-0.1645	-0.2500	-0.0529	-0.1021	0.0230	-0.1315	0.0237
9	-0.3738	-0.2803	-0.3440	-0.1174	-0.1563	-0.2090	-0.1129	-0.1173	-0.0167	-0.2531	-0.3360
10	-0.1342	-0.1249	-0.1016	0.1507	0.0151	-0.0081	0.1845	0.1092	0.1476	0.0307	0.0962
11	0.2409	0.3270	0.1758	0.1961	0.0649	0.0278	0.1478	0.0443	0.2487	0.1264	0.1548
12	0.1411	0.1547	0.1329	0.2054	0.2371	0.1066	0.2481	0.1797	0.0314	0.2445	0.1297
22	0.6120	0.6430	0.5200	0.2837	0.2016	0.2629	0.0883	0.0859	0.2182	0.6557	0.2835
23	0.6336	0.6312	0.4986	0.3575	0.2576	0.3790	0.0450	0.1691	0.2486	0.6336	0.3333
24	0.5692	0.5554	0.4917	0.2418	0.1566	0.1558	0.0877	0.0015	0.2420	0.6350	0.2652
25	1.0000	0.8923	0.9269	0.1734	0.1526	0.2130	0.0366	0.0388	0.1382	0.4702	0.2717
26	0.8923	1.0000	0.5582	0.1667	0.1388	0.3754	-0.1328	0.1408	0.0697	0.4045	0.3600
27	0.9269	0.5582	1.0000	0.1540	0.1221	0.0669	0.1040	-0.0032	0.1614	0.4135	0.2303
28	0.1734	0.1667	0.1540	1.0000	0.6426	0.6449	0.4080	0.7224	0.6794	0.3735	0.0632
29	0.1526	0.1388	0.1221	0.6426	1.0000	0.7086	0.7710	0.3806	0.0551	0.2742	0.0635
30	0.2130	0.3754	0.0669	0.6449	0.7086	1.0000	0.1265	0.4823	0.2640	0.3282	0.1568
31	0.0366	-0.1328	0.1040	0.4080	0.7710	0.1265	1.0000	0.1866	-0.0280	0.1002	0.0081
32	0.0388	0.1408	-0.0032	0.7224	0.3806	0.4823	0.1866	1.0000	0.1586	0.2514	0.1334
33	0.1382	0.0697	0.1614	0.6794	0.0551	0.2640	-0.0280	0.1586	1.0000	0.2349	-0.0344
34	0.4702	0.4045	0.4135	0.3735	0.2742	0.3282	0.1002	0.2514	0.2349	1.0000	0.3663
35	0.2717	0.3600	0.2303	0.0632	0.0635	0.1568	0.0081	0.1334	-0.0344	0.3663	1.0000

TABLE 30

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR WHITE FEMALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 119

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	0.0355	0.8458
2	40.4997	22.6914
3	7.2216	2.6457
4	38.6769	19.7617
5	6.8222	1.8459
7	4.1765	1.8441
8	1.5966	1.2165
9	1.6218	1.2755
10	1.7983	0.4030
11	100.7899	12.1146
12	2.5018	0.8191
22	5.1858	1.7993
23	4.9794	2.0051
24	5.3182	2.0361
25	54.1928	7.4189
26	53.5416	9.1062
27	54.7093	8.2397
28	3.4342	0.6045
29	4.3361	0.7454
30	3.6293	0.8079
31	5.0000	1.0373
32	3.5763	0.7669
33	2.3950	0.9317
34	14.7479	2.0282
35	52.8762	21.1136

NOTES: 1) The data in Table 30 are based on the subset of 12 schools for which data was gathered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 30 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.8283	0.8956	0.5923	0.7939	-0.3056	-0.1591	-0.2230	0.0052	0.3598	0.3003	0.5390	0.5913	0.4118
2	0.8283	1.0000	0.6746	0.4317	0.4214	-0.2638	-0.1210	-0.2282	0.0628	0.3642	0.3071	0.4006	0.4833	0.2812
3	0.8956	0.6746	1.0000	0.5125	0.5709	-0.2517	-0.1257	-0.1907	-0.0735	0.3749	0.3255	0.5380	0.5841	0.4093
4	0.5923	0.4317	0.5125	1.0000	0.5374	-0.1791	-0.0182	-0.1901	-0.0070	0.1652	0.1682	0.3830	0.3616	0.3220
5	0.7939	0.4214	0.5709	0.5374	1.0000	-0.2741	-0.1669	-0.1587	0.0134	0.1745	0.1368	0.4220	0.4362	0.3445
7	-0.3056	-0.2638	-0.2517	-0.1791	-0.2741	1.0000	0.7195	0.7384	0.0027	-0.1030	-0.0910	-0.0935	-0.1190	-0.1011
8	-0.1591	-0.1210	-0.1257	-0.0182	-0.1669	0.7195	1.0000	0.0920	0.0401	-0.0248	0.0770	-0.1186	-0.0752	-0.1786
9	-0.2230	-0.2282	-0.1907	-0.1901	-0.1587	0.7384	0.0920	1.0000	-0.0177	-0.1072	-0.1894	0.0133	-0.0630	0.0512
10	0.0052	0.0628	-0.0735	-0.0070	0.0134	0.0027	0.0401	-0.0177	1.0000	-0.0747	0.1271	0.0358	0.0589	0.0877
11	0.3598	0.3642	0.3749	0.1652	0.1745	-0.1030	-0.0248	-0.1072	-0.0747	1.0000	0.6190	0.4842	0.4778	0.4130
12	0.3003	0.3071	0.3255	0.1682	0.1368	-0.0910	0.0770	-0.1894	0.1271	0.6190	1.0000	0.3540	0.3781	0.2708
22	0.5390	0.4006	0.5380	0.3830	0.4220	-0.0935	-0.1186	0.0133	0.0358	0.4842	0.3540	1.0000	0.6603	0.6984
23	0.5913	0.4833	0.5841	0.3616	0.4362	-0.1190	-0.0752	-0.0630	0.0589	0.4778	0.3781	0.6603	1.0000	0.5536
24	0.4118	0.2812	0.4093	0.3220	0.3445	-0.1011	-0.1786	0.0512	0.0877	0.4130	0.2708	0.6984	0.5536	1.0000
25	0.1743	0.1549	0.1996	0.0623	0.0774	0.0177	-0.0267	0.0487	-0.0092	0.5145	0.3234	0.4974	0.4696	0.4279
26	0.1085	0.1047	0.0773	0.0079	0.0972	-0.0256	-0.1274	0.0712	0.1217	0.4124	0.3282	0.3920	0.3525	0.3373
27	0.1997	0.1870	0.2605	0.0671	0.0491	0.0218	0.0209	0.0171	-0.0345	0.4901	0.2723	0.4908	0.4645	0.4225
28	0.4933	0.4528	0.4728	0.3202	0.3143	0.0422	0.0615	0.0352	0.0320	0.5364	0.2937	0.6756	0.5685	0.6282
29	0.3538	0.2959	0.3577	0.3146	0.2346	-0.0127	0.0527	-0.0345	-0.0686	0.4293	0.2199	0.5159	0.4182	0.4939
30	0.3774	0.3561	0.3948	0.2438	0.2021	-0.0643	-0.1032	0.0302	0.1452	0.3195	0.1034	0.5634	0.5444	0.4996
31	0.2045	0.1331	0.1946	0.2461	0.1856	0.0578	0.1416	-0.0193	-0.1221	0.3493	0.2449	0.3031	0.1752	0.3221
32	0.2169	0.2447	0.2066	0.0361	0.0821	0.0957	0.0334	0.1163	-0.0322	0.4423	0.2817	0.4102	0.2818	0.4165
33	0.4994	0.4454	0.4630	0.3444	0.3535	0.0133	0.0320	-0.0016	0.1462	0.3363	0.1559	0.5610	0.5525	0.4745
34	0.4482	0.3811	0.3736	0.3370	0.3795	-0.0583	-0.0313	-0.0175	-0.0005	0.4725	0.3742	0.7105	0.5871	0.6886
35	0.1862	0.0359	0.2202	0.2225	0.2118	-0.0538	-0.0624	-0.0386	-0.0087	0.2395	0.1423	0.4854	0.4536	0.3673

	25	26	27	28	29	30	31	32	33	34	35
1	0.1743	0.1085	0.1997	0.4933	0.3538	0.3774	0.2045	0.2169	0.4994	0.4482	0.1862
2	0.1549	0.1047	0.1870	0.4528	0.2959	0.3561	0.1331	0.2447	0.4454	0.3811	0.0359
3	0.1996	0.0773	0.2605	0.4728	0.3577	0.3948	0.1946	0.2066	0.4630	0.3736	0.2202
4	0.0623	0.0079	0.0671	0.3202	0.3146	0.2438	0.2461	0.0361	0.3444	0.3370	0.2225
5	0.0774	0.0972	0.0491	0.3143	0.2346	0.2021	0.1856	0.0821	0.3535	0.3795	0.2118
7	0.0177	-0.0256	0.0218	0.0422	-0.0127	-0.0643	0.0578	0.0957	0.0133	-0.0583	-0.0538
8	-0.0267	-0.1274	0.0209	0.0615	0.0527	-0.1032	0.1416	0.0334	0.0520	-0.0313	-0.0624
9	0.0487	0.0712	0.0171	0.0352	-0.0345	0.0302	-0.0193	0.1163	-0.0016	-0.0175	-0.0386
10	-0.0092	0.1217	-0.0345	0.0320	-0.0686	0.1452	-0.1221	-0.0322	0.1462	-0.0005	-0.0087
11	0.5145	0.4124	0.4901	0.5364	0.4293	0.3195	0.3493	0.4423	0.3363	0.4725	0.2395
12	0.3234	0.3282	0.2723	0.2937	0.2199	0.1034	0.2449	0.2817	0.1559	0.3742	0.1423
22	0.4974	0.3920	0.4908	0.6756	0.5159	0.5634	0.3031	0.4102	0.5610	0.7105	0.4854
23	0.4696	0.3525	0.4645	0.5685	0.4182	0.5444	0.1752	0.2818	0.5525	0.5871	0.4536
24	0.4279	0.3373	0.4225	0.6282	0.4939	0.4996	0.3221	0.4165	0.4745	0.6886	0.3673
25	1.0000	0.1792	0.8691	0.4780	0.4080	0.4604	0.2090	0.3093	0.3550	0.4620	0.2259
26	0.1792	1.0000	0.5062	0.3496	0.2652	0.3758	0.0804	0.2454	0.2745	0.3444	0.0963
27	0.8691	0.5062	1.0000	0.4989	0.4655	0.4570	0.2974	0.3131	0.3458	0.4676	0.2725
28	0.4780	0.3496	0.4989	1.0000	0.7329	0.6598	0.5291	0.7186	0.7687	0.6367	0.3629
29	0.4080	0.2652	0.4655	0.7329	1.0000	0.7243	0.8362	0.3604	0.3258	0.5280	0.3437
30	0.4604	0.3758	0.4570	0.6598	0.7243	1.0000	0.2440	0.3295	0.4397	0.4763	0.2378
31	0.2090	0.0804	0.2974	0.5291	0.8362	0.2440	1.0000	0.2712	0.1320	0.3886	0.3096
32	0.3093	0.2454	0.3131	0.7186	0.3604	0.3295	0.2712	1.0000	0.2922	0.4238	0.1761
33	0.3550	0.2745	0.3458	0.7687	0.3258	0.4397	0.1320	0.2922	1.0000	0.4662	0.2551
34	0.4620	0.3444	0.4676	0.6367	0.5280	0.4763	0.3886	0.4238	0.4662	1.0000	0.4010
35	0.2259	0.0963	0.2725	0.3629	0.3437	0.2378	0.3096	0.1761	0.2551	0.4010	1.0000

TABLE 31

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR BLACK MALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 117

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	-0.1721	0.7040
2	32.1778	21.1750
3	6.6293	2.0158
4	2.8797	8.3976
5	6.8869	1.8114
7	4.8803	2.5669
8	2.1770	1.6089
9	1.9739	1.6673
10	1.7807	0.4156
11	89.2544	13.6173
12	1.7310	0.8278
22	4.1216	1.5554
23	4.2222	1.7393
24	3.9541	1.6799
25	54.0946	9.9468
26	54.8625	11.9966
27	53.3889	10.6787
28	3.4017	0.6373
29	3.9914	0.6884
30	3.8468	0.8334
31	4.1293	0.8396
32	3.5133	0.8464
33	2.7217	1.0048
34	15.5517	2.4578
35	51.2936	26.0556

NOTES: 1) The data in Table 31 are based on the subset of 12 schools for which data was gathered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 31 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.7403	0.7708	-0.0461	0.7542	-0.1804	-0.1975	-0.1641	0.0026	0.3385	0.1087	0.3468	0.2934	0.3343
2	0.7403	1.0000	0.4398	-0.0583	0.2026	-0.1072	-0.1498	-0.0907	0.0223	0.2441	0.0375	0.2034	0.1498	0.2088
3	0.7708	0.4398	1.0000	-0.0100	0.3456	-0.1647	-0.2607	-0.0487	0.0384	0.2813	0.1913	0.2196	0.1598	0.2158
4	-0.0461	-0.0583	-0.0100	1.0000	-0.0382	-0.0471	0.0191	-0.1172	-0.0005	0.0197	0.1812	-0.0828	0.0002	-0.1263
5	0.7542	0.2026	0.3456	-0.0382	1.0000	-0.1674	-0.1336	-0.2057	-0.0895	0.2242	0.1148	0.4003	0.3158	0.3836
7	-0.1804	-0.1072	-0.1647	-0.0471	-0.1674	1.0000	0.7108	0.6861	-0.2838	-0.1491	-0.1728	-0.2316	-0.3332	-0.1610
8	-0.1975	-0.1498	-0.2607	0.0191	-0.1336	0.7108	1.0000	0.1060	-0.3193	-0.1183	-0.0957	-0.1542	-0.1887	-0.0987
9	-0.1641	-0.0907	-0.0487	-0.1172	-0.2057	0.6861	0.1060	1.0000	-0.1365	-0.1224	-0.1175	-0.1913	-0.2568	-0.1552
10	0.0026	0.0223	0.0384	-0.0005	-0.0895	-0.2838	-0.3193	-0.1365	1.0000	0.0728	-0.0004	-0.1280	-0.0335	-0.1292
11	0.3385	0.2441	0.2813	0.0197	0.2242	-0.1491	-0.1183	-0.1224	0.0728	1.0000	0.4018	0.3219	0.2823	0.3507
12	0.1087	0.0375	0.1913	0.1812	0.1148	-0.1728	-0.0957	-0.1175	-0.0004	0.4018	1.0000	0.4633	0.3901	0.4743
22	0.3468	0.2034	0.2196	-0.0828	0.4003	-0.2316	-0.1542	-0.1913	-0.1280	0.3219	0.4633	1.0000	0.9115	0.9287
23	0.2934	0.1498	0.1598	0.0002	0.3158	-0.3332	-0.1887	-0.2568	-0.0335	0.2823	0.3901	0.9115	1.0000	0.6518
24	0.3343	0.2088	0.2158	-0.1263	0.3836	-0.1610	-0.0987	-0.1552	-0.1292	0.3507	0.4743	0.9287	0.6518	1.0000
25	0.2866	0.1323	0.1146	0.0086	0.2977	-0.0233	0.1242	-0.1082	-0.0658	0.3806	0.3453	0.5785	0.5800	0.5505
26	0.2406	0.1710	0.1842	-0.1271	0.1585	-0.1006	0.0987	-0.1432	-0.0605	0.2960	0.3055	0.5106	0.5451	0.4096
27	0.2566	0.0777	0.0858	0.1479	0.3121	0.0210	0.0695	-0.0880	-0.0399	0.3487	0.3218	0.5558	0.4716	0.5586
28	0.1380	-0.1097	0.0955	-0.0382	0.1831	0.0235	-0.0229	0.0304	-0.0715	0.0512	0.0832	0.1243	0.1072	0.1447
29	0.1117	-0.1173	0.1058	0.0382	0.1717	0.0754	0.0298	0.0113	-0.1674	0.0042	0.2116	0.1688	0.0931	0.1963
30	0.0225	-0.0605	0.0420	0.1228	0.0458	0.0202	0.0392	-0.0326	-0.0128	0.0218	0.1965	0.1410	0.0816	0.1705
31	0.1432	-0.1303	0.1456	-0.0570	0.2238	0.0762	-0.0086	0.0267	-0.2327	-0.0324	0.1835	0.1412	0.0727	0.1599
32	0.0864	-0.0276	-0.0248	0.0792	0.0869	-0.0198	0.0791	-0.0804	0.0186	0.1025	-0.0228	0.0045	0.0293	0.0501
33	0.1251	-0.1132	0.1111	-0.0793	0.1774	0.0259	-0.0809	0.0997	-0.0094	-0.0032	0.0425	0.0785	0.0838	0.0745
34	0.2754	0.1982	0.2203	0.0044	0.2316	-0.1191	-0.0623	-0.1322	-0.0607	0.2369	0.3148	0.4498	0.4091	0.4464
35	0.2777	0.2234	0.2663	-0.1579	0.2278	-0.1023	-0.0809	-0.0159	-0.0718	0.1698	0.3192	0.5228	0.3705	0.5381

	25	26	27	28	29	30	31	32	33	34	35
1	0.2866	0.2406	0.2566	0.1380	0.1117	0.0225	0.1432	0.0864	0.1251	0.2754	0.2777
2	0.1323	0.1710	0.0777	-0.1097	-0.1173	-0.0605	-0.1303	-0.0276	-0.1132	0.1982	0.2234
3	0.1146	0.1842	0.0858	0.0955	0.1058	0.0420	0.1456	-0.0248	0.1111	0.2203	0.2663
4	0.0086	-0.1271	0.1479	-0.0382	0.0382	0.1228	-0.0570	0.0792	-0.0793	0.0044	-0.1579
5	0.2977	0.1585	0.3121	0.1831	0.1717	0.0458	0.2238	0.0869	0.1774	0.2316	0.2278
7	-0.0233	-0.1006	0.0210	0.0235	0.0754	0.0202	0.0762	-0.0198	0.0259	-0.1191	-0.1023
8	0.1242	0.0987	0.0695	-0.0229	0.0298	0.0392	-0.0086	0.0791	-0.0809	-0.0623	-0.0809
9	-0.1082	-0.1432	-0.0880	0.0304	0.0113	-0.0326	0.0267	-0.0804	0.0997	-0.1322	-0.0159
10	-0.0658	-0.0605	-0.0399	-0.0715	-0.1674	-0.0128	-0.2327	0.0186	-0.0094	-0.0607	-0.0718
11	0.3806	0.2960	0.3487	0.0512	0.0042	0.0218	-0.0324	0.1025	-0.0032	0.2369	0.1698
12	0.3453	0.3055	0.3218	0.0832	0.2116	0.1965	0.1835	-0.0228	0.0425	0.3148	0.3192
22	0.5785	0.5106	0.5558	0.1243	0.1688	0.1410	0.1412	0.0045	0.0785	0.4498	0.5228
23	0.5800	0.5451	0.4716	0.1072	0.0931	0.0816	0.0727	0.0293	0.0838	0.4091	0.3705
24	0.5505	0.4096	0.5586	0.1447	0.1963	0.1705	0.1599	0.0501	0.0745	0.4464	0.5381
25	1.0000	0.8584	0.8680	0.0615	0.0635	0.0220	0.1167	0.0394	-0.0041	0.3037	0.3444
26	0.8584	1.0000	0.3789	-0.1168	-0.1336	-0.1782	-0.0411	-0.1121	-0.0650	0.1582	0.1992
27	0.8680	0.3789	1.0000	0.1275	0.1864	0.1410	0.1787	0.0794	0.0396	0.3692	0.3853
28	0.0615	-0.1168	0.1275	1.0000	0.7241	0.6360	0.5614	0.7078	0.7679	0.3135	0.1003
29	0.0835	-0.1336	0.1864	0.7241	1.0000	0.8187	0.8295	0.3623	0.3573	0.2778	0.0765
30	0.0220	-0.1782	0.1410	0.6360	0.8187	1.0000	0.3514	0.3759	0.2840	0.2878	0.0091
31	0.1167	-0.0411	0.1787	0.5614	0.8295	0.3514	1.0000	0.2252	0.2966	0.1758	0.1335
32	0.0394	-0.1121	0.0794	0.7078	0.3623	0.3759	0.2252	1.0000	0.2302	0.1134	0.1049
33	-0.0041	-0.0650	0.0396	0.7679	0.3573	0.2840	0.2966	0.2302	1.0000	0.2727	0.0165
34	0.3037	0.1582	0.3692	0.3135	0.2778	0.2878	0.1758	0.1134	0.2727	1.0000	0.4235
35	0.3444	0.1992	0.3853	0.1003	0.0765	0.0091	0.1335	0.1049	0.0165	0.4235	1.0000

TABLE 32

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR WHITE MALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 134

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	0.2499	0.9082
2	43.4853	24.5629
3	7.8399	2.9188
4	2.1963	7.7005
5	7.3221	1.9146
7	3.9850	1.9962
8	1.6538	1.3737
9	1.4884	1.3412
10	1.9538	0.7106
11	102.1703	12.7833
12	2.1857	0.8649
22	4.0315	1.5233
23	4.1532	1.6525
24	3.9760	1.6484
25	54.2913	9.2793
26	54.3964	10.1267
27	54.3600	10.0333
28	3.3269	0.6034
29	3.7388	0.8128
30	3.6742	0.8334
31	3.7985	0.9159
32	3.4925	0.6800
33	2.7197	1.0213
34	15.2910	2.4056
35	47.9355	26.5231

NOTES: 1) The data in Table 32 are based on the subset of 12 schools for which data was gathered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 32 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.8512	0.6526	-0.0924	0.7874	-0.1903	-0.1477	-0.1476	-0.0350	0.4614	0.3065	0.6179	0.5455	0.5541
2	0.8512	1.0000	0.6183	-0.1401	0.5004	-0.1461	-0.0775	-0.1316	-0.0645	0.3551	0.1756	0.5094	0.4174	0.4938
3	0.6528	0.6183	1.0000	-0.1057	0.4774	-0.2077	-0.1617	-0.1481	0.1036	0.4375	0.2939	0.5535	0.4893	0.4722
4	-0.0924	-0.1401	-0.1057	1.0000	0.0141	0.0081	0.0434	0.0395	0.0389	-0.1698	-0.0735	0.0710	0.1000	0.0414
5	0.7874	0.5004	0.4774	0.0141	1.0000	-0.0904	-0.1186	-0.0574	-0.1379	0.3428	0.2796	0.4655	0.4344	0.4065
7	-0.1903	-0.1461	-0.2077	0.0081	-0.0904	1.0000	0.7299	0.7016	0.0325	-0.2820	-0.1553	-0.2491	-0.0992	-0.2684
8	-0.1477	-0.0775	-0.1617	0.0434	-0.1186	0.7299	1.0000	0.0740	-0.0259	-0.2731	-0.0907	-0.2237	-0.1029	-0.2176
9	-0.1476	-0.1316	-0.1481	0.0395	-0.0574	0.7016	0.0740	1.0000	0.0484	-0.1349	-0.0938	-0.1629	-0.0676	-0.1993
10	-0.0350	-0.0645	0.1036	0.0389	-0.1379	0.0325	-0.0259	0.0484	1.0000	-0.0498	0.0209	-0.0597	-0.0511	-0.0757
11	0.4614	0.3551	0.4375	-0.1698	0.3428	-0.2820	-0.2731	-0.1349	-0.0498	1.0000	0.5103	0.5842	0.4921	0.5451
12	0.3065	0.1756	0.2939	-0.0735	0.2796	-0.1553	-0.0907	-0.0938	0.0209	0.5103	1.0000	0.5232	0.4118	0.4420
22	0.6179	0.5094	0.5535	0.0710	0.4655	-0.2491	-0.2237	-0.1629	-0.0597	0.5842	0.5232	1.0000	0.9004	0.5116
23	0.5455	0.4174	0.4893	0.1000	0.4344	-0.0992	-0.1029	-0.0676	-0.0511	0.4921	0.4118	0.9004	1.0000	0.6056
24	0.5541	0.4938	0.4722	0.0414	0.4065	-0.2684	-0.2176	-0.1993	-0.0757	0.5451	0.4420	0.5116	0.6056	1.0000
25	0.3756	0.3584	0.3010	0.0360	0.2605	-0.2925	-0.3126	-0.1203	-0.1609	0.4863	0.4471	0.6808	0.6905	0.5751
26	0.3511	0.3606	0.2732	-0.0208	0.2206	-0.1635	-0.2530	0.0071	-0.0164	0.4328	0.3221	0.6323	0.6640	0.4717
27	0.3332	0.3017	0.2654	0.0803	0.2456	-0.3051	-0.2539	-0.2038	-0.1558	0.4527	0.4636	0.6277	0.5812	0.5642
28	0.4438	0.4048	0.3753	-0.0646	0.3085	-0.2239	-0.1956	-0.1630	0.0448	0.4973	0.3521	0.6015	0.4983	0.6000
29	0.3518	0.3308	0.2869	-0.1707	0.2532	-0.1207	-0.1348	-0.0496	0.0465	0.3416	0.2686	0.5491	0.4759	0.5595
30	0.3288	0.2824	0.3022	-0.1730	0.2262	-0.1796	-0.1676	-0.0797	0.1493	0.3408	0.2662	0.4995	0.4075	0.4859
31	0.3344	0.3303	0.2481	-0.1471	0.2516	-0.0477	-0.0741	-0.0144	-0.0043	0.3082	0.2611	0.5411	0.4881	0.5701
32	0.1267	0.0071	0.1103	0.0330	0.1556	-0.0949	-0.1718	0.0022	0.0463	0.1731	0.2116	0.2079	0.2068	0.1808
33	0.4274	0.4343	0.3661	-0.0827	0.2538	-0.2363	-0.1295	-0.2449	0.0101	0.5054	0.2715	0.4922	0.3625	0.4984
34	0.4609	0.3986	0.4479	-0.0657	0.2910	-0.2539	-0.1633	-0.1887	-0.0320	0.5224	0.4018	0.7650	0.6694	0.7065
35	0.4187	0.3909	0.3703	0.1062	0.2859	-0.3107	-0.1965	-0.2605	-0.1449	0.4834	0.2188	0.6026	0.4592	0.6004

	25	26	27	28	29	30	31	32	33	34	35
1	0.3756	0.3511	0.3332	0.4438	0.3518	0.3288	0.3344	0.1267	0.4274	0.4609	0.4187
2	0.3584	0.3606	0.3017	0.4048	0.3308	0.2824	0.3303	0.0071	0.4343	0.3986	0.3909
3	0.3010	0.2732	0.2654	0.3753	0.2869	0.3022	0.2481	0.1103	0.3661	0.4479	0.3703
4	0.0360	-0.0208	0.0803	-0.0646	-0.1707	-0.1730	-0.1471	0.0330	-0.0827	-0.0657	0.1062
5	0.2605	0.2206	0.2456	0.3065	0.2532	0.2262	0.2516	0.1556	0.2538	0.2910	0.2859
7	-0.2925	-0.1635	-0.3051	-0.2239	-0.1207	-0.1796	-0.0477	-0.0949	-0.2363	-0.2539	-0.3107
8	-0.3126	-0.2530	-0.2539	-0.1956	-0.1348	-0.1676	-0.0741	-0.1718	-0.1295	-0.1633	-0.1965
9	-0.1203	0.0071	-0.2038	-0.1630	-0.0496	-0.0797	-0.0144	0.0022	-0.2449	-0.1887	-0.2605
10	-0.1609	-0.0164	-0.1558	0.0448	0.0465	0.1493	-0.0043	0.0463	0.0101	-0.0320	-0.1449
11	0.4863	0.4328	0.4527	0.4973	0.3416	0.3408	0.3062	0.1731	0.5054	0.5224	0.4834
12	0.4471	0.3221	0.4636	0.3521	0.2686	0.2662	0.2611	0.2116	0.2715	0.4018	0.2188
22	0.6808	0.6323	0.6277	0.6015	0.5491	0.4995	0.5411	0.2079	0.4922	0.7650	0.6026
23	0.6905	0.6640	0.5812	0.4983	0.4759	0.4075	0.4881	0.2068	0.3625	0.6694	0.4592
24	0.5751	0.4717	0.5642	0.6000	0.5595	0.4859	0.5701	0.1808	0.4984	0.7065	0.6004
25	1.0000	0.9041	0.9138	0.4987	0.4351	0.4152	0.3997	0.2457	0.3862	0.6034	0.4538
26	0.9041	1.0000	0.6201	0.5288	0.4561	0.4612	0.4035	0.2960	0.3868	0.5363	0.3563
27	0.9138	0.6201	1.0000	0.4143	0.3842	0.3423	0.3728	0.1849	0.3125	0.5722	0.4375
28	0.4987	0.5288	0.4143	1.0000	0.7165	0.6637	0.6644	0.5984	0.8051	0.6258	0.5157
29	0.4351	0.4561	0.3842	0.7165	1.0000	0.9183	0.9338	0.2005	0.3508	0.5429	0.3770
30	0.4152	0.4612	0.3473	0.6637	0.9183	1.0000	0.7134	0.2215	0.3132	0.5039	0.3313
31	0.3997	0.4035	0.3728	0.6644	0.9338	0.7134	1.0000	0.1606	0.3370	0.5285	0.3785
32	0.2457	0.2960	0.1849	0.5984	0.2005	0.2215	0.1606	1.0000	0.2294	0.2243	0.1492
33	0.3862	0.3868	0.3125	0.8051	0.3508	0.3132	0.3370	0.2294	1.0000	0.5278	0.5245
34	0.6034	0.5363	0.5722	0.6258	0.5429	0.5039	0.5285	0.2243	0.5278	1.0000	0.5446
35	0.4538	-0.3563	0.4375	0.5157	0.3770	0.3313	0.3785	0.1492	0.5245	0.5446	1.0000

TABLE 33

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR ALL FEMALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 226

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	-0.0862	0.7947
2	34.6821	22.3415
3	6.9591	2.4111
4	34.7036	18.9626
5	6.7962	1.7953
7	4.6770	2.3902
8	1.8053	1.4352
9	1.9071	1.6426
10	1.6614	0.4670
11	96.2168	12.1831
12	2.4185	0.8161
22	5.7200	2.1726
23	3.6026	2.3582
24	5.7409	2.2719
25	54.9484	8.0637
26	54.1248	9.2675
27	55.4898	9.7883
28	3.5336	0.6031
29	4.4690	0.7639
30	3.7217	0.8446
31	5.1150	1.0176
32	3.5656	0.7813
33	2.5708	0.9784
34	15.3319	2.3515
35	54.9515	21.2494
36	1.5265	0.5004

NOTES: 1) The data in Table 33 are based on the subset of 12 schools for which data was gathered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 33 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.8014	0.8537	0.5048	0.7764	-0.2980	-0.1891	-0.2418	-0.0470	0.3533	0.2629	0.2870	0.3185	0.2627
2	0.8014	1.0000	0.5919	0.3518	0.3339	-0.2806	-0.1692	-0.2578	0.0419	0.3916	0.2598	0.1312	0.1479	0.1024
3	0.8537	0.5919	1.0000	0.3963	0.4722	-0.1824	-0.1395	-0.1180	-0.0999	0.3070	0.2184	0.3050	0.3407	0.2604
4	0.5048	0.3518	0.3963	1.0000	0.4670	-0.2105	-0.0610	-0.2148	0.0137	0.2041	0.0892	0.2917	0.2300	0.2935
5	0.7764	0.3339	0.4722	0.4670	1.0000	-0.3172	-0.2001	-0.2574	-0.0582	0.1913	0.1516	0.3104	0.3094	0.3000
7	-0.2980	-0.2806	-0.1824	-0.2105	-0.3172	1.0000	0.7408	0.8040	-0.0647	-0.2703	-0.0904	-0.1036	-0.1545	-0.0974
8	-0.1891	-0.1692	-0.1395	-0.0610	-0.2001	0.7408	1.0000	0.2091	-0.0067	-0.1356	-0.0084	-0.0523	-0.1076	-0.0712
9	-0.2418	-0.2578	-0.1180	-0.2148	-0.2574	0.8040	0.2091	1.0000	-0.0909	-0.2699	-0.1184	-0.0936	-0.1101	-0.0716
10	-0.0470	0.0419	-0.0999	0.0137	-0.0582	-0.0647	-0.0067	-0.0909	1.0000	0.1466	0.1249	-0.0628	-0.0905	0.0012
11	0.3533	0.3916	0.3070	0.2041	0.1913	-0.2703	-0.1356	-0.2699	0.1466	1.0000	0.5141	0.1653	0.1867	0.1639
12	0.2629	0.2598	0.2184	0.0892	0.1516	-0.0904	-0.0084	-0.1184	0.1249	0.5141	1.0000	0.2315	0.1727	0.2022
22	0.2870	0.1312	0.3050	0.2917	0.3104	-0.1036	-0.0523	-0.0936	-0.0628	0.1653	0.2315	1.0000	0.9191	0.9322
23	0.3185	0.1479	0.3407	0.2300	0.3094	-0.1545	-0.1076	-0.1101	-0.0905	0.1867	0.1727	0.9191	1.0000	0.6559
24	0.2627	0.1024	0.2604	0.2935	0.3000	-0.0974	-0.0712	-0.0716	0.0012	0.1639	0.2022	0.9322	0.6559	1.0000
25	0.1842	0.0901	0.1612	0.1751	0.1856	-0.1442	-0.0349	-0.1714	-0.1000	0.2986	0.2123	0.5637	0.5413	0.5095
26	0.1256	0.0525	0.0953	0.0881	0.1614	-0.0963	-0.0780	-0.0742	-0.0058	0.3214	0.2406	0.4963	0.4687	0.4282
27	0.1871	0.1225	0.1822	0.1846	0.1475	-0.1194	-0.0025	-0.1608	-0.0932	0.2643	0.1835	0.5110	0.4834	0.4667
28	0.2776	0.2242	0.3097	0.1606	0.1641	-0.0197	-0.0023	-0.0167	0.0421	0.2856	0.2292	0.5074	0.5218	0.4726
29	0.1745	0.1500	0.1863	0.1939	0.1050	-0.0712	-0.0359	-0.0661	-0.0714	0.1707	0.2035	0.3851	0.3845	0.3577
30	0.2491	0.2153	0.2485	0.1268	0.1658	-0.1575	-0.1591	-0.0875	0.0322	0.1331	0.0906	0.4353	0.4959	0.3653
31	0.0700	0.0308	0.0598	0.1826	0.0513	-0.0048	0.0550	-0.0468	0.0026	0.1937	0.2303	0.2150	0.1518	0.2276
32	0.0997	0.1242	0.0851	0.0741	0.0351	-0.0433	-0.0419	-0.0212	0.0448	0.2549	0.2333	0.2426	0.2332	0.2220
33	0.2931	0.2079	0.3570	0.0817	0.1957	0.0488	0.0637	0.0249	0.0885	0.1905	0.0736	0.4165	0.4817	0.3862
34	0.2282	0.1476	0.1665	0.2380	0.2615	-0.1121	-0.0466	-0.1082	-0.0530	0.1611	0.2593	0.7031	0.6520	0.6786
35	0.1510	0.0236	0.1135	0.1600	0.2235	-0.1192	0.0013	-0.1903	0.0205	0.1444	0.1183	0.3770	0.4149	0.3214
36	0.1618	0.2967	0.1210	0.2113	0.0154	-0.2213	-0.1537	-0.1835	0.2646	0.3967	0.1083	-0.2809	-0.3554	-0.2148

	25	26	27	28	29	30	31	32	33	34	35	36
1	0.1842	0.1256	0.1871	0.2776	0.1745	0.2491	0.0700	0.0997	0.2931	0.2282	0.1510	0.1618
2	0.0901	0.0525	0.1225	0.2242	0.1500	0.2153	0.0308	0.1242	0.2079	0.1476	0.0238	0.2967
3	0.1612	0.0953	0.1822	0.3097	0.1863	0.2485	0.0598	0.0851	0.3570	0.1665	0.1135	0.1210
4	0.1751	0.0881	0.1846	0.1606	0.1939	0.1268	0.1826	0.0741	0.0817	0.2380	0.1600	0.2113
5	0.1856	0.1614	0.1475	0.1641	0.1050	0.1658	0.0513	0.0351	0.1957	0.2615	0.2235	0.0154
7	-0.1442	-0.0963	-0.1194	-0.0197	-0.0712	-0.1575	-0.0048	-0.0433	0.0488	-0.1121	-0.1192	-0.2213
8	-0.0349	-0.0780	-0.0025	-0.0023	-0.0359	-0.1591	0.0550	-0.0419	0.0637	-0.0466	0.0013	-0.1537
9	-0.1714	-0.0742	-0.1608	-0.0167	-0.0661	-0.0875	-0.0468	-0.0212	0.0249	-0.1082	-0.1903	-0.1835
10	-0.1000	-0.0058	-0.0932	0.0421	-0.0714	0.0322	0.0026	0.0448	0.0885	-0.0530	0.0205	0.2646
11	0.2986	0.3214	0.2643	0.2856	0.1707	0.1331	0.1937	0.2549	0.1905	0.1611	0.1444	0.3967
12	0.2123	0.2406	0.1835	0.2292	0.2035	0.0906	0.2303	0.2333	0.0736	0.2593	0.1183	0.1083
22	0.5637	0.4963	0.5110	0.5074	0.3851	0.4353	0.2150	0.2426	0.4165	0.7031	0.3770	-0.2809
23	0.5413	0.4687	0.4834	0.5218	0.3845	0.4959	0.1518	0.2332	0.4817	0.6520	0.4149	-0.3554
24	0.5095	0.4282	0.4667	0.4726	0.3577	0.3653	0.2276	0.2220	0.3862	0.6786	0.3214	-0.2148
25	1.0000	0.8848	0.8995	0.3504	0.2968	0.3591	0.1378	0.1851	0.2629	0.4749	0.2547	-0.1061
26	0.8848	1.0000	0.5298	0.2940	0.2276	0.3813	0.0110	0.2108	0.2095	0.3732	0.2111	-0.0759
27	0.8995	0.5298	1.0000	0.3559	0.3136	0.2977	0.2162	0.1712	0.2698	0.4475	0.2553	-0.1016
28	0.3504	0.2940	0.3559	1.0000	0.7001	0.6584	0.4843	0.7052	0.7338	0.5171	0.2244	-0.1742
29	0.2968	0.2276	0.3138	0.7001	1.0000	0.7207	0.8079	0.3620	0.2200	0.4190	0.2154	-0.1839
30	0.3591	0.3813	0.2977	0.6584	0.7207	1.0000	0.2002	0.4003	0.3686	0.4122	0.2082	-0.1205
31	0.1378	0.0110	0.2162	0.4843	0.8079	0.2002	1.0000	0.2282	0.0766	0.2589	0.1696	-0.1195
32	0.1851	0.2108	0.1712	0.7052	0.3620	0.4003	0.2282	1.0000	0.2191	0.3143	0.1503	0.0146
33	0.2629	0.2095	0.2698	0.7338	0.2200	0.3686	0.0766	0.2191	1.0000	0.3713	0.1198	-0.1900
34	0.4749	0.3732	0.4475	0.5171	0.4190	0.4122	0.2589	0.3143	0.3713	1.0000	0.3892	-0.2625
35	0.2547	0.2111	0.2553	0.2244	0.2154	0.2082	0.1696	0.1503	0.1198	0.3892	1.0000	-0.0998
36	-0.1061	-0.0759	-0.1016	-0.1742	-0.1839	-0.1205	-0.1195	0.0146	-0.1900	-0.2625	-0.0998	1.0000

TABLE 34

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR ALL MALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 251

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	0.0524	0.8442
2	38.4757	23.7524
3	7.2511	2.6084
4	2.5179	8.0262
5	7.1194	1.8761
7	4.4040	2.3200
8	1.8971	1.6089
9	1.7172	1.5201
10	1.8730	0.3337
11	96.1822	14.4029
12	1.9777	0.8763
22	4.0735	1.5357
23	4.1623	1.6855
24	3.9658	1.6596
25	54.1996	9.5764
26	54.5916	10.9208
27	53.9099	10.3264
28	3.3586	0.6195
29	3.8560	0.7666
30	3.7531	0.8361
31	3.9520	0.8929
32	3.5020	0.7591
33	2.7206	1.0116
34	15.4120	2.4285
35	49.5064	26.3025
36	1.5339	0.4998

NOTES: 1) The data in Table 34 are based on the subset of 12 schools for which data was gathered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 34 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.8221	0.8372	-0.0688	0.7705	-0.2192	-0.1984	-0.1851	0.0539	0.4601	0.2779	0.4786	0.4248	0.4475
2	0.8221	1.0000	0.5813	-0.0817	0.3945	-0.1623	-0.1391	-0.1456	0.0403	0.3688	0.1763	0.3645	0.2951	0.3681
3	0.8372	0.5813	1.0000	-0.0512	0.4368	-0.2166	-0.2235	-0.1353	0.1184	0.4218	0.2988	0.4012	0.3448	0.3611
4	-0.0688	-0.0817	-0.0512	1.0000	-0.0332	-0.0119	0.0387	-0.0657	-0.0257	-0.0858	0.0356	-0.0432	0.0165	-0.0794
5	0.7705	0.3945	0.4368	-0.0332	1.0000	-0.1476	-0.1432	-0.1496	-0.0672	0.3045	0.2291	0.4287	0.3780	0.3941
7	-0.2192	-0.1623	-0.2166	-0.0119	-0.1476	1.0000	0.7271	0.7015	-0.2334	-0.2696	-0.2011	-0.2298	-0.2039	-0.2102
8	-0.1984	-0.1391	-0.2235	0.0387	-0.1432	0.7271	1.0000	0.1159	-0.2667	-0.2400	-0.1254	-0.1754	-0.1424	-0.1489
9	-0.1851	-0.1456	-0.1353	-0.0657	-0.1496	0.7015	0.1159	1.0000	-0.1174	-0.1818	-0.1381	-0.1715	-0.1539	-0.1744
10	0.0539	0.0403	0.1184	-0.0257	-0.0672	-0.2334	-0.2667	-0.1174	1.0000	0.1434	0.0712	-0.1025	-0.0376	-0.1006
11	0.4601	0.3688	0.4218	-0.0858	0.3045	-0.2696	-0.2400	-0.1818	0.1434	1.0000	0.5109	0.3918	0.3474	0.4033
12	0.2779	0.1763	0.2988	0.0356	0.2291	-0.2011	-0.1254	-0.1381	0.0712	0.5109	1.0000	0.4674	0.3760	0.4655
22	0.4786	0.3645	0.4012	-0.0432	0.4287	-0.2298	-0.1754	-0.1715	-0.1025	0.3918	0.4674	1.0000	0.4044	0.9193
23	0.4248	0.2951	0.3448	0.0165	0.3780	-0.2039	-0.1424	-0.1539	-0.0376	0.3474	0.3760	0.4044	1.0000	0.6235
24	0.4475	0.3681	0.3611	-0.0794	0.3941	-0.2102	-0.1489	-0.1744	-0.1006	0.4033	0.4655	0.9193	0.6235	1.0000
25	0.3259	0.2535	0.2196	0.0094	0.2768	-0.1500	-0.0750	-0.1148	-0.0929	0.3874	0.3835	0.6300	0.6398	0.5632
26	0.2848	0.2641	0.2199	-0.0876	0.1877	-0.1276	-0.0688	-0.0658	-0.0488	0.3168	0.2855	0.5729	0.6070	0.4394
27	0.3000	0.2094	0.1982	0.1079	0.2792	-0.1413	-0.0855	-0.1469	-0.0678	0.3758	0.3932	0.5908	0.5295	0.5612
28	0.2862	0.1654	0.2381	-0.0498	0.2402	-0.0750	-0.0896	-0.0510	-0.0464	0.2177	0.2076	0.3727	0.3276	0.3615
29	0.2121	0.1195	0.1779	-0.0704	0.1968	0.0069	-0.0278	0.0045	-0.1134	0.0991	0.1944	0.3851	0.3250	0.3988
30	0.1802	0.1151	0.1750	-0.0262	0.1359	-0.0555	-0.0436	-0.0407	0.0117	0.1246	0.2050	0.3338	0.2663	0.3392
31	0.2026	0.1033	0.1578	-0.0960	0.2141	0.0488	-0.0111	0.0328	-0.1772	0.0553	0.1711	0.3618	0.3199	0.3810
32	0.0985	-0.0214	0.0438	0.0404	0.1179	-0.0472	-0.0238	-0.0441	0.0202	0.1127	0.0909	0.1022	0.1237	0.1131
33	0.2953	0.2059	0.2590	-0.0675	0.2179	-0.0956	-0.1014	-0.0664	-0.0042	0.2329	0.1694	0.2977	0.2388	0.2996
34	0.3562	0.2941	0.3357	-0.0279	0.2555	-0.1673	-0.0990	-0.1470	-0.0613	0.3128	0.3385	0.6154	0.5557	0.5821
35	0.3330	0.2972	0.3036	-0.0782	0.2511	-0.1863	-0.1180	-0.1260	-0.1105	0.2668	0.2355	0.5661	0.4215	0.5710
36	0.2499	0.2370	0.2318	-0.0426	0.1159	-0.1930	-0.1625	-0.1598	0.2594	0.4462	0.2591	-0.0293	-0.0203	0.0066

	25	26	27	28	29	30	31	32	33	34	35	36
1	0.3259	0.2848	0.3000	0.2862	0.2121	0.1802	0.2026	0.0985	0.2953	0.3562	0.3330	0.2499
2	0.2535	0.2641	0.2094	0.1654	0.1195	0.1151	0.1033	-0.0214	0.2059	0.2941	0.2972	0.2370
3	0.2196	0.2199	0.1982	0.2381	0.1779	0.1750	0.1578	0.0438	0.2590	0.3357	0.3036	0.2318
4	0.0094	-0.0876	0.1079	-0.0498	-0.0704	-0.0262	-0.0960	0.0404	-0.0675	-0.0279	-0.0782	-0.0426
5	0.2768	0.1877	0.2792	0.2402	0.1968	0.1359	0.2141	0.1179	0.2179	0.2555	0.2511	0.1159
7	-0.1500	-0.1276	-0.1413	-0.0750	0.0069	-0.0555	0.0488	-0.0472	-0.0956	-0.1673	-0.1863	-0.1930
8	-0.0750	-0.0688	-0.0855	-0.0896	-0.0278	-0.0436	-0.0111	-0.0238	-0.1014	-0.0990	-0.1180	-0.1625
9	-0.1148	-0.0658	-0.1469	-0.0510	0.0045	-0.0407	0.0328	-0.0441	-0.0664	-0.1470	-0.1260	-0.1598
10	-0.0929	-0.0488	-0.0678	-0.0464	-0.1134	0.0117	-0.1772	0.0202	-0.0042	-0.0613	-0.1105	0.2594
11	0.3874	0.3168	0.3758	0.2177	0.0991	0.1246	0.0553	0.1127	0.2329	0.3128	0.2668	0.4462
12	0.3835	0.2855	0.3932	0.2076	0.1944	0.2050	0.1711	0.0909	0.1694	0.3385	0.2355	0.2591
22	0.6300	0.5729	0.5908	0.3727	0.3851	0.3338	0.3618	0.1022	0.2977	0.6154	0.5661	-0.0293
23	0.6398	0.6070	0.5295	0.3276	0.3250	0.2663	0.3199	0.1237	0.2388	0.5557	0.4215	-0.0203
24	0.5632	0.4394	0.5612	0.3615	0.3988	0.3392	0.3810	0.1131	0.2996	0.5821	0.5710	0.0066
25	1.0000	0.8907	0.8912	0.2823	0.2740	0.2358	0.2635	0.1374	0.1992	0.4562	0.4000	0.0103
26	0.8907	1.0000	0.5046	0.2296	0.2107	0.1727	0.2138	0.0957	0.1747	0.3605	0.2856	-0.0211
27	0.8912	0.5046	1.0000	0.2723	0.2865	0.2490	0.2726	0.1308	0.1834	0.4701	0.4096	0.0470
28	0.2823	0.2296	0.2723	1.0000	0.7168	0.6542	0.6183	0.6516	0.7854	0.4784	0.3259	-0.0652
29	0.2740	0.2107	0.2865	0.7168	1.0000	0.8744	0.8944	0.2697	0.3490	0.4300	0.2575	-0.1646
30	0.2358	0.1727	0.2490	0.6542	0.8744	1.0000	0.5612	0.2980	0.2997	0.4072	0.1935	-0.1030
31	0.2635	0.2138	0.2726	0.6183	0.8944	0.5612	1.0000	0.1889	0.3143	0.3732	0.2759	-0.1847
32	0.1374	0.0957	0.1308	0.6516	0.2697	0.2980	0.1889	1.0000	0.2285	0.1665	0.1283	-0.0136
33	0.1992	0.1747	0.1834	0.7854	0.3490	0.2997	0.3143	0.2285	1.0000	0.4107	0.2962	-0.0010
34	0.4562	0.3605	0.4701	0.4784	0.4300	0.4072	0.3732	0.1665	0.4107	1.0000	0.4904	-0.0536
35	0.4000	0.2856	0.4096	0.3259	0.2575	0.1935	0.2759	0.1283	0.2962	0.4904	1.0000	-0.0638
36	0.0103	-0.0211	0.0470	-0.0652	-0.1646	-0.1030	-0.1847	-0.0136	-0.0010	-0.0536	-0.0638	1.0000

TABLE 35

MEANS, STANDARD DEVIATIONS, AND CORRELATIONS FOR ALL FEMALES AND ALL MALES: SUBSET OF VARIABLES AVAILABLE FOR MALES AND FEMALES

NUMBER OF CASES = 477

VARIABLE NUMBER	MEANS	STANDARD DEVIATIONS
1	-0.0134	0.8231
2	36.7208	23.1620
3	7.1316	2.5212
4	15.5051	20.8130
5	6.9667	1.6436
7	4.5336	2.3550
8	1.8329	1.5267
9	1.6085	1.5813
10	1.7809	0.4141
11	96.1487	13.3743
12	2.1833	0.8759
22	4.8253	2.0255
23	4.6076	2.1270
24	4.7681	2.1483
25	54.5396	8.9192
26	54.3863	10.2147
27	54.6216	9.6843
28	3.4415	0.6174
29	4.1471	0.8236
30	3.7385	0.8394
31	4.5042	1.1173
32	3.5321	0.7695
33	2.6490	0.4976
34	15.3735	2.3901
35	52.0615	24.1965
36	1.5304	0.4996
37	1.5262	0.4995

NOTES: 1) The data in Table 35 are based on the subset of 12 schools for which data was gathered from both males and females. 2) Variable numbers in the table correspond to the variable numbers in the list of variables presented in the first part of this appendix.

Table 35 – Cont.

CORRELATION MATRIX

	1	2	3	4	5	7	8	9	10	11	12	22	23	24
1	1.0000	0.8144	0.8448	0.1481	0.7748	-0.2593	-0.1911	-0.2159	0.0189	0.4132	0.2418	0.3134	0.3129	0.2883
2	0.8144	1.0000	0.5881	0.0808	0.3737	-0.2184	-0.1502	-0.1980	0.0547	0.3751	0.1857	0.2000	0.1823	0.1896
3	0.8448	0.5881	1.0000	0.1082	0.4552	-0.2032	-0.1857	-0.1293	0.0172	0.3732	0.2379	0.2997	0.2941	0.2580
4	0.1481	0.0808	0.1082	1.0000	0.1325	-0.0580	-0.0578	-0.0679	-0.2420	0.0726	0.2424	0.4167	0.3416	0.4129
5	0.7748	0.3737	0.4552	0.1325	1.0000	-0.2309	-0.1643	-0.2061	-0.0399	0.2552	0.1671	0.2952	0.2861	0.2780
7	-0.2593	-0.2184	-0.2032	-0.0580	-0.2309	1.0000	0.7291	0.7538	-0.1454	-0.2683	-0.1291	-0.1279	-0.1560	-0.1180
8	-0.1911	-0.1502	-0.1857	-0.0578	-0.1643	0.7291	1.0000	0.1574	-0.1108	-0.1962	-0.0790	-0.1161	-0.1183	-0.1168
9	-0.2159	-0.1980	-0.1293	-0.0679	-0.2061	0.7538	0.1574	1.0000	-0.1148	-0.2202	-0.1085	-0.0996	-0.1243	-0.0876
10	0.0189	0.0547	0.0172	-0.2420	-0.0399	-0.1454	-0.1108	-0.1148	1.0000	0.1379	0.0371	-0.1655	-0.1319	-0.1225
11	0.4132	0.3751	0.3732	0.0726	0.2552	-0.2683	-0.1962	-0.2202	0.1379	1.0000	0.4947	0.2548	0.2659	0.2585
12	0.2418	0.1857	0.2379	0.2424	0.1671	-0.1291	-0.0790	-0.1085	0.0371	0.4947	1.0000	0.4053	0.3401	0.3922
22	0.3134	0.2000	0.2997	0.4167	0.2952	-0.1279	-0.1161	-0.0996	-0.1655	0.2548	0.4053	1.0000	0.9218	0.9390
23	0.3129	0.1823	0.2941	0.3416	0.2861	-0.1560	-0.1183	-0.1243	-0.1319	0.2659	0.3401	0.9218	1.0000	0.6870
24	0.2883	0.1896	0.2580	0.4129	0.2780	-0.1180	-0.1168	-0.0876	-0.1225	0.2585	0.3922	0.9390	0.6870	1.0000
25	0.2652	0.1888	0.1956	0.1061	0.2355	-0.1451	-0.0616	-0.1368	-0.1002	0.3545	0.3125	0.5446	0.5513	0.4909
26	0.2216	0.1823	0.1716	0.0072	0.1781	-0.1162	-0.0722	-0.0690	-0.0195	0.3164	0.2467	0.4658	0.4874	0.3730
27	0.2476	0.1714	0.1876	0.1598	0.2181	-0.1278	-0.0564	-0.1477	-0.0932	0.3336	0.3179	0.5201	0.4898	0.4881
28	0.2666	0.1796	0.2592	0.1616	0.1900	-0.0400	-0.0544	-0.0251	-0.0298	0.2438	0.2458	0.4569	0.4375	0.4428
29	0.1491	0.0955	0.1469	0.3370	0.1097	-0.0068	-0.0388	-0.0068	-0.1643	0.1198	0.2715	0.4758	0.4292	0.4702
30	0.2129	0.1616	0.2087	0.0384	0.1506	-0.1057	-0.0949	-0.0648	0.0271	0.1276	0.1443	0.3457	0.3617	0.3133
31	0.0725	0.0155	0.0619	0.4340	0.0669	0.0488	0.0047	0.0222	-0.1763	0.1006	0.2943	0.4275	0.3566	0.4423
32	0.0951	0.0440	0.0599	0.0654	0.0749	-0.0432	-0.0334	-0.0304	0.0220	0.1746	0.1609	0.1843	0.1852	0.1739
33	0.2988	0.2114	0.3050	-0.0305	0.2134	-0.0310	-0.0256	-0.0251	0.0634	0.2139	0.1091	0.2931	0.3012	0.2788
34	0.2987	0.2316	0.2636	0.0665	0.2586	-0.1418	-0.0752	-0.1284	-0.0486	0.2470	0.2932	0.5934	0.5631	0.5670
35	0.2479	0.1783	0.2207	0.1051	0.2264	-0.1483	-0.0716	-0.1460	-0.0646	0.2187	0.2086	0.4611	0.4280	0.4431
36	0.2090	0.2621	0.1813	0.0483	0.0697	-0.2066	-0.1579	-0.1714	0.2532	0.4231	0.1813	-0.1362	-0.1573	-0.0845
37	0.0842	0.0818	0.0638	-0.7596	0.0876	-0.0579	0.0301	-0.0601	0.2313	-0.0013	-0.2513	-0.4054	-0.3320	-0.4117

	25	26	27	28	29	30	31	32	33	34	35	36	37
1	0.2652	0.2216	0.2476	0.2666	0.1491	0.2129	0.0725	0.0951	0.2988	0.2987	0.2479	0.2090	0.0842
2	0.1888	0.1823	0.1714	0.1796	0.0955	0.1616	0.0155	0.0440	0.2114	0.2316	0.1783	0.2621	0.0818
3	0.1956	0.1716	0.1876	0.2592	0.1469	0.2087	0.0619	0.0599	0.3050	0.2636	0.2207	0.1813	0.0638
4	0.1061	0.0072	0.1598	0.1616	0.3370	0.0384	0.4340	0.0654	-0.0305	0.0665	0.1051	0.0483	-0.7596
5	0.2355	0.1781	0.2181	0.1900	0.1097	0.1506	0.0669	0.0749	0.2134	0.2586	0.2264	0.0697	0.0876
7	-0.1451	-0.1162	-0.1278	-0.0400	-0.0068	-0.1057	0.0488	-0.0432	-0.0310	-0.1418	-0.1483	-0.2066	-0.0579
8	-0.0616	-0.0722	-0.0564	-0.0544	-0.0388	-0.0949	0.0047	-0.0334	-0.0256	-0.0752	-0.0716	-0.1579	0.0301
9	-0.1368	-0.0690	-0.1477	-0.0251	-0.0068	-0.0648	0.0222	-0.0304	-0.0251	-0.1284	-0.1460	-0.1714	-0.0601
10	-0.1002	-0.0195	-0.0932	-0.0298	-0.1643	0.0271	-0.1763	0.0220	0.0634	-0.0486	-0.0646	0.2532	0.2313
11	0.3545	0.3164	0.3336	0.2438	0.1198	0.1276	0.1006	0.1746	0.2139	0.2470	0.2187	0.4231	-0.0013
12	0.3125	0.2467	0.3179	0.2458	0.2715	0.1443	0.2943	0.1609	0.1091	0.2932	0.2086	0.1813	-0.2513
22	0.5446	0.4658	0.5201	0.4569	0.4758	0.3457	0.4275	0.1843	0.2931	0.5934	0.4611	-0.1362	-0.4054
23	0.5513	0.4874	0.4898	0.4375	0.4292	0.3617	0.3566	0.1852	0.3012	0.5631	0.4280	-0.1573	-0.3320
24	0.4909	0.3730	0.4881	0.4428	0.4702	0.3133	0.4423	0.1739	0.2788	0.5670	0.4431	-0.0845	-0.4117
25	1.0000	0.8806	0.1939	0.3115	0.2767	0.2343	0.1960	0.1584	0.2202	0.4617	0.3528	-0.0362	-0.0418
26	0.8806	1.0000	0.5093	0.2498	0.1935	0.2577	0.0921	0.1409	0.1843	0.3644	0.2570	-0.0437	0.0227
27	0.1939	0.5093	1.0000	0.3129	0.3043	0.2665	0.2501	0.1505	0.2102	0.4577	0.3614	-0.0114	-0.0813
28	0.3115	0.2498	0.3129	1.0000	0.7031	0.6488	0.5366	0.6752	0.7405	0.4891	0.2953	-0.1160	-0.1417
29	0.2767	0.1935	0.3043	0.7031	1.0000	0.7467	0.8664	0.3060	0.2388	0.3880	0.2624	-0.1648	-0.3721
30	0.2343	0.2577	0.2665	0.6488	0.7467	1.0000	0.3158	0.3471	0.3322	0.4097	0.1947	-0.1113	0.0187
31	0.1960	0.0921	0.2501	0.5366	0.8664	0.3158	1.0000	0.1994	0.1260	0.2604	0.2501	-0.1341	-0.5203
32	0.1584	0.1409	0.1505	0.6752	0.3060	0.3471	0.1994	1.0000	0.2198	0.2352	0.1387	-0.0004	-0.0413
33	0.2202	0.1843	0.2102	0.7405	0.2388	0.3322	0.1260	0.2198	1.0000	0.3919	0.2126	-0.0889	0.0751
34	0.4617	0.3644	0.4577	0.4891	0.3880	0.4097	0.2604	0.2352	0.3919	1.0000	0.4434	-0.1510	0.0168
35	0.3528	0.2570	0.3614	0.2953	0.2624	0.1947	0.2501	0.1387	0.2126	0.4434	1.0000	-0.0804	-0.1125
36	-0.0362	-0.0437	-0.0114	-0.1160	-0.1648	-0.1113	-0.1341	-0.0004	-0.0889	-0.1510	-0.0804	1.0000	0.0073
37	-0.0418	0.0227	-0.0813	-0.1417	-0.3721	0.0187	-0.5203	-0.0413	0.0751	0.0168	-0.1125	0.0073	1.0000

APPENDIX C

INSTRUMENTATION

This appendix reproduces each of the items from the questionnaires that form part of the operational definition of one or more variables used in the report. In addition, several items that were not used in the report are also included in order to improve continuity of the questionnaires. Nevertheless, many items appearing in the original questionnaires are omitted from this appendix. In most instances the numerical code assigned to each response alternative for a given item are shown within square brackets in the space provided for the subjects' responses. The items are numbered consecutively within the questionnaire from which they were taken; the five questionnaires are listed below:

1. SID (Student's questionnaire, completed by students), page 141
2. EDSO (Educational Definers for Self and Object, completed by students), page 147
3. ODSO (Occupational Definers for Self and Object, completed by students), page 153
4. PID-1 (Father's questionnaire, completed by fathers), page 157
5. PID-II (Mother's questionnaire, completed by mothers), page 169

Every question asked of the male sample was also asked of the female sample, but some questions (referring to home and family) appeared on the questionnaires for females that did not appear on the questionnaires for the males. Items appearing only on the female questionnaires are identified in the presentation.

INSTRUCTIONS

Answer each of the following questions by circling the number of the proper alternative or placing an "X" in the appropriate column.

Code Values	QUESTIONS
	Instructions. Read each of the following questions carefully. Answer to the best of your ability. There are several questions which refer to your parents. If for any reason you are not living with your parents, answer for the person who acts as your parent or guardian. Please answer all questions. If you have any questions, please raise your hand for assistance. Do not mark in "code" column.
	1. What is your father's occupation? (Please be specific in answering this question; if your father is retired, deceased, or unemployed, please list the job he held last.) Answer [Coded into Duncan SEI scores].
	2. What was the highest school grade completed by your father? (Circle one number) 1. Did not go to school 2. 1st grade 3. 2nd grade 4. 3rd grade 5. 4th grade 6. 5th grade 7. 6th grade 8. 7th grade 9. 8th grade 10. 9th grade 11. 10th grade 12. 11th grade 13. Graduate from high school 14. Some vocational-technical education 15. Graduate from vocational-technical school 16. Some college 17. Graduate from college (B.A., B.S.) 18. Some graduate school 19. Master's degree (M.A., M.S.) 20. Some graduate school after master's degree 21. Doctorate or equivalent degree (Ph.D., M.D., O.D.) [Codes correspond to numbers beside each response alternative].
	3. What is your mother's occupation? (Please be specific in answering this question; if your mother does not work put housewife.) Answer [Coded into Duncan SEI scores, housewife = missing data].
	4. What was the highest school grade completed by your mother? (Write one number in space provided from the list for question 2.) Answer ____________________

Code Values	QUESTIONS
	5. List the ages of all of your brothers. Answer ____________________ ____
	6. List the ages of all of your sisters. Answer ____________________ ____
	7. Where are you living at present? [2] with my parents [1] other (explain)____________________
	8. Including food, housing and all other expenses, about how much of your living expenses does your mother pay? (Asked of female respondents only.) [1] All of my living expenses [2] More than two-thirds [3] Between one-third and two-thirds [4] Less than one-third [5] None of my living expenses
	ITEMS 9 THROUGH 18 WERE ASKED OF FEMALE RESPONDENTS ONLY. 9. Do you plan to marry? [2] Yes [1] No If you do not plan to marry, go to question 13.
	10. At what age do you plan to marry? ____________________

Code Values	QUESTIONS
	11. Do you plan to have children? [2] Yes [1] No
	12. How many children do you plan to have? ______________________
	13. The following question concerns the plan you have for your life with regard to combining a career with marriage and family. Circle the one which is closest to what you plan for yourself. 1. I plan to devote all my time to marriage and a family without a career. 2. I plan to work for a while after marriage but eventually devote full 2. time to my home and children. 3. I plan to devote full time to my children during their early years and then return to work when they get older. 4. I plan to work most of the time after marriage taking only short periods off to have children or not having children. 5. I plan to devote all my time to my career without marriage and a family. [Codes correspond to numbers beside each response alternative.]
	For the following statements, decide on the degree to which you agree or disagree with each statement and then place an "X" in the appropriate column. This should be how you personally feel about the statement, not how you think other people feel.

	STATEMENTS	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	14. Women who have jobs are not really happy	[1]	[2]	[3]	[4]	[5]
	15. Woman's place is in the home.	[1]	[2]	[3]	[4]	[5]
	16. Women are trying to imitate men.	[1]	[2]	[3]	[4]	[5]

Code Values	QUESTIONS					
	STATEMENTS	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	17. Married women should hold jobs so they can have a life of their own.	[5]	[4]	[3]	[2]	[1]
	18. Parents should encourage the idea of marriage and homemaking (rather than working) to their daughters from childhood.	[1]	[2]	[3]	[4]	[5]
	19. Concerning your very close friends, which statement best describes them: [4] 1. Just about all of my close friends are planning to go to college. [3] 2. About half of my close friends are planning to go to college. [2] 3. Only a few of my close friends are planning to go to college. [1] 4. None of my close friends are planning to go to college.					

Educational Definers for Self and Object

INSTRUCTIONS
Section One

I. We would like to know what your future educational plans are. Read each of the following questions carefully and answer honestly. Any information you give on this or any other questionnaire will be kept confidential. If you do not understand a question, raise your hand and a reasearch worker will assist you.

EDSO 3

INSTRUCTIONS: Place an "X" in the appropriate column.

CODE	QUESTIONS	Strongly discouraged me from going to college	Discouraged me from going to college	Has not influenced me one way or the other concerning going to college	Encouraged me to go to college	Strongly encouraged me to go to college
	1. In general, my father has:	[1]	[2]	[3]	[4]	[5]
	2. In general, my mother has:	[1]	[2]	[3]	[4]	[5]
	3. In general, my teachers have:	[1]	[2]	[3]	[4]	[5]

4. If you were completely free to get any amount of education you wanted, how much would you get? (Circle one answer)

  1. I would not go to school at all.
  2. 1st grade
  3. 2nd grade
  4. 3rd grade
  5. 4th grade
  6. 5th grade
  7. 6th grade
  8. 7th grade
  9. 8th grade
  10. 9th grade
  11. 10th grade
  12. 11th grade
  13. graduate from high school
  14. some vocational-technical education
  15. graduate from vocational-technical school
  16. some college
  17. graduate from college (B.A., B.S.)
  18. some graduate school
  19. master's degree (M.A., M.S.)
  20. some graduate school after the master's degree
  21. doctorate or equivalent degree (Ph.D., M.D., O.D.)

5. Considering the amount of education you desire how much will you actually try to get? (Circle one answer)

  1. I would not go to school at all
  2. 1st grade
  3. 2nd grade
  4. 3rd grade
  5. 4th grade
  6. 5th grade
  7. 6th grade
  8. 7th grade
  9. 8th grade
  10. 9th grade
  11. 10th grade
  12. 11th grade
  13. graduate from high school
  14. some vocational-technical education
  15. graduate from vocational-technical school
  16. some college
  17. graduate from college (B.A., B.S.)
  18. some graduate school
  19. master's degree (M.A., M.S.)
  20. some graduate school after the master's degree
  21. doctorate or equivalent degree (Ph.D., M.D., O.D.)

6. Sometimes we cannot get what we want. Taking everything into consideration (your abilities, money available, etc.) how much education do you really expect to get? (Circle one answer)

1. I would not go to school at all
2. 1st grade
3. 2nd grade
4. 3rd grade
5. 4th grade
6. 5th grade
7. 6th grade
8. 7th grade
9. 8th grade
10. 9th grade
11. 10th grade
12. 11th grade
13. graduate from high school
14. some vocational-technical education
15. graduate from vocational-technical school
16. some college
17. graduate from college (B.A., B.S.)
18. some graduate school
19. master's degree (M.A., M.S.)
20. some graduate school after the master's degree
21. doctorate or equivalent degree (Ph.D., M.D., O.D.)

Occupational Definers for Self and Object

INSTRUCTIONS
Section One

I. We would like to know what your future job plans are. Read each of the following three questions carefully and answer honestly. Any information you give on this or any other questionnaire will be kept confidential. If you do not understand a question, raise your hand and a research worker will assist you.

ODSO 2

1. a. If you were completely free to work at any occupation in the world, what would your life time job be?

Answer: [Coded into Duncan SEI scores, housewife = missing data]

b. For this job, would you be (Circle one number).

1. Self-employed 2. Employed by someone else

[Code corresponds to the number beside each response alternative]

2. a. Considering the job you desire, what job will you actually try to get as your life time work?

Answer: [Coded into Duncan SEI scores, housewife = missing data]

b. For this job, would you be (Circle one number)

1. Self-employed 2. Employed by someone else

[Code corresponds to the number beside each response alternative]

3. a. Sometimes we cannot get what we want. Taking everything into consideration (your abilities, interests, opportunities, available money, etc.) what job do you really expect to have most of your life?

Answer: [Coded into Duncan SEI scores, housewife = missing data]

b. For this job, would you be (Circle one number)

1. Self-employed 2. Employed by soneone else

[Code corresponds to the number beside each response alternative]

4. In general, most of my friends are planning to work in the same or similar type of job as I have indicated in question No. 2 above.

[1] a. agree [2] b. disagree

PID-No. 1

For Father or Male Guardian

Section I

GENERAL INSTRUCTIONS

The National Center for Research in Vocational Education at The Ohio State University is trying to find out what students think about occupations and education. In order to have a successful study we need the aid and cooperation of the parents or guardians of the students who are participating in this study. Your daughter has been randomly selected to participate in this study. We would greatly appreaciate it if you would take the time to complete this questionnaire.

None of the questions you are being asked to answer have "right" or "wrong" answers. We want to know your own personal opinions. It is important that you answer all questions as best you can, EVEN IF YOU HAVE TO GUESS.

No one will see your specific answers. Special safeguards have been established to make sure that your replies will be kept strictly confidential. However, if you feel that any question is improper, please feel free to skip that specific item.*

PLEASE NOTE: If you have any problems or questions concerning the questionnaire, call the following numbers between 6 p.m. and 10:30 p.m. and a researcher will assist you.

A. ______________________

B. ______________________

C. ______________________

Thank you.

____

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*After reading the above instructions please sign your name.

PID - 1

INSTRUCTIONS: We would like some information about you. Remember, answers that you will provide will be confidential and not seen by anyone except the research staff. Please answer each of the following questions to the best of your ability. Do not mark in the "code" column.

CODE	QUESTIONS
	1. Date of birth ______________ Age __________ (Month) (Day) (Year)
	2. Sex: [1] (a) Male [2] (b) Female
	3. Race: [1] (a) White [2] (b) Black [3] (c) Oriental [4] (d) Spanish [5] (e) Other
	4. How old were you when you first married? ______________
	The next few questions concern your present job.
	5. At this time you are: [1] (a) employed [2] (b) unemployed [3] (c) retired
	6. What is your occupation? (Specify the kind of work you do—if you are unemployed or retired indicate the last job you held.) [Coded into Duncan SEI scores]
	7. Is this job Full Time or Part Time? (If unemployed or retired, answer questions 8, 9, 10, 11, 12 as though you were employed at the last job you held.) [2] (a) Full Time [1] (b) Part Time
	Question 7 was not included in the questionnaire for parents of males.

CODE	QUESTIONS
	8. Who do you work for? [1] (a) self employed [2] (b) private employer [3] (c) military [4] (d) federal government [5] (e) state government [6] (f) local government
	9. How long have you worked at your present job? [1] (a) less than one year [2] (b) 1-2 years [3] (c) 3-5 years [4] (d) 6-10 years [5] (e) 11-20 years [6] (f) more than 20 years
	10. How much money do you make each month from your present job (If you have more than one job, show your income from all your jobs)? ____________________ dollars per month
	11. How long have you had the same occupation? [1] (a) less than one year [2] (b) 1-2 years [3] (c) 3-5 years [4] (d) 6-10 years [5] (e) 11-20 years [6] (f) more than 20 years
	12. Do you hold more than one job at this time? [1] (a) Yes [0] (b) No
	13. If you hold more than one job, please specify what you do at each of them. (a) ____________________ (b) ____________________ (c) ____________________

CODE	QUESTIONS
	The next few questions concern the job you held just before your present job.
	14. What type of work did you do at that job? ____
	15. Was this job Full Time or Part Time? [2] (a) Full Time [1] (b) Part Time
	16. Who do you work for? [1] (a) self-employed [2] (b) private employer [3] (c) military [4] (d) federal government [5] (e) state government [6] (f) local government
	17. How long did you work at that job? [1] (a) less than one year [2] (b) 1-2 years [3] (c) 3-5 years [4] (d) 6-10 years [5] (e) 11-20 years [6] (f) more than 20 years
	18. How much money did you make each month at that job? (If you had more than one job show your income from all your jobs.) ____________________ dollars per month
	19. Did you hold more than one job at that time? [1] (a) Yes [0] (b) No
	20. When you changed from your PREVIOUS MAIN job to your PRESENT MAIN job, were you unemployed for a period of time? [1] (a) Yes [0] (b) No

CODE	QUESTIONS
	21. If yes, how long were you unemployed? ____
	22. How much schooling did you complete? [1] none [2] 1st grade [3] 2nd grade [4] 3rd grade [5] 4th grade [6] 5th grade [7] 6th grade [8] 7th grade [9] 8th grade [10] 9th grade [11] 10th grade [12] 11th grade [13] graduated from high school [14] some vocational-technical school [15] graduated from vocational-technical school [16] some college [17] graduated from college (B.A., or B.S. degree) [18] some graduate school [19] master's degree (M.A., or M.S. degree) [20] some graduate school after master's degree but no doctorate [21] doctorate or equivalent degree (Ph.D., M.D., D.D., etc.) [Code corresponds to the number beside each response alternative]
	The following questions concern your interest in marriage and/or career for (name of daughter). Please answer all questions, EVEN IF YOU MUST GUESS.
	23. At what age would you like to have her marry? ____________________ (If you would like to see her remain single, place "0" in the blank.)
	24. Assuming that she does marry, would you like for her to have children? __[1]__ Yes __[0]__ No

CODE	QUESTIONS
	25. How many children would you like for her to have? ____________________________
	This set of questions concerns your interest in the future of (name of daughter). Please answer both questions, EVEN IF YOU MUST GUESS.
	26. Which of the following plans for combining a career with marriage would you like to see her follow for her life? ____ 1. Devote all her time to marriage and a family without a career ____ 2. Work for a while after marriage but eventually devote full time to her home and children ____ 3. Devote full time to her children during their early years and then return to work when they get older ____ 4. Work most of the time after marriage taking only short periods off to have children or not having children ____ 5. Devote all her time to her career without marriage and a family [Codes correspond to the number beside each response alternative]
	27. Which of the following plans for combining a career with marriage do you think she really will follow? ____ 1. Devote all her time to marriage and a family without a career ____ 2. Work for a while after marriage but eventually devote full time to her home and children ____ 3. Devote full time to her children during their early years and then return to work when they get older ____ 4. Work most of the time after marriage taking only short periods off to have children ____ 5. Devote all her time to her career without marriage and a family [Code corresponds to the number beside each response alternative]

For the following statements, decide on the degree to which you agree or disagree with each statement and then place an "X" in the appropriate column. This should be how you personally feel about the statement, not how you think other people feel.

CODE	STATEMENTS	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	28. Women who have jobs are not really happy.	[1]	[2]	[3]	[4]	[5]
	29. Women's place is in the home.	[1]	[2]	[3]	[4]	[5]
	30. Women are trying to imitate men.	[1]	[2]	[3]	[4]	[5]
	31. Married women should hold jobs so they can have a life of their own.	[5]	[4]	[3]	[2]	[1]
	32. Parents should encourage the idea of marriage and homemaking (rather than working) to their daughters from childhood.	[1]	[2]	[3]	[4]	[5]

INSTRUCTIONS: The following questions are about (name of daughter). Please answer them to the best of your ability, EVEN IF YOU MUST GUESS.

33. How much education would you like to see her have if NOTHING prevented her from having AS MUCH AS SHE WANTED?

1. [11] 10th grade
2. [12] 11th grade
3. [13] graduate from high school
4. [14] some vocational-technical school
5. [15] graduate from vocational-technical school
6. [16] some college
7. [17] graduate from college
8. [18] some graduate school
9. [19] master's degree (M.A., M.S.)
10. [20] some graduate school after the master's degree
11. [21] doctorate or equivalent degree (Ph.D., M.D., D.D.)

CODE	QUESTIONS
	34. How much education do you think she REALLY WILL GET? (Check one answer) 1. [11] 10th grade 2. [12] 11th grade 3. [13] graduate from high school 4. [14] some vocational-technical school 5. [15] graduate from vocational-technical school 6. [16] some college 7. [17] graduate from college 8. [18] some graduate school 9. [19] master's degree (M.A., M.S.) 10. [20] some graduate school after the master's degree 11. [21] doctorate or equivalent degree (Ph.D., M.D., D.D.)
	INSTRUCTIONS: This set of questions concerns your interest in different kinds of jobs for ____(name of daughter)____. There are eight questions, you are to check ONE job in EACH question. Make sure it is the BEST ANSWER you can give to this question. Read each question carefully. They are all different. Do not omit any, EVEN IF YOU MUST GUESS.
	35. Of the job listed in this question, which is the BEST ONE you are REALLY SURE SHE CAN GET when her SCHOOLING IS OVER? 1. [8] Lawyer 2. [5] Welfare worker for a city government 3. [9] United States representative in Congress 4. [3] Corporal in the Army 5. [10] United States Supreme Court Justice 6. [1] Night watchman 7. [7] Sociologist 8. [4] Policeman 9. [6] County agricultural agent 10. [2] Filling station attendant

CODE	QUESTIONS
	36. Of the jobs listed in the question, which ONE would you most like to see her have if she were FREE TO CHOOSE ANY of them she wished when her SCHOOLING IS OVER? 1. [8] Member of the board of directors of a large corporation 2. [5] Undertaker 3. [9] Banker 4. [3] Machine operator in a factory 5. [10] Physician (doctor) 6. [1] Clothes presser in a laundry 7. [7] Accountant for a large business 8. [4] Railroad conductor 9. [6] Railroad engineer 10. [2] Singer in a nightclub
	37. Of the jobs listed in this question which is the BEST ONE you are REALLY SURE SHE CAN GET when her SCHOOLING IS OVER? 1. [8] Nuclear physicist 2. [5] Reporter for a daily newspaper 3. [9] County judge 4. [3] Barber 5. [10] State governor 6. [1] Soda fountain clerk 7. [7] Biologist 8. [4] Mail carrier 9. [6] Official of an international labor union 10. [2] Farm hand
	38. Of the jobs listed in this question, which ONE would you most like to see her have if she were FREE TO CHOOSE ANY of them she wished when her SCHOOLING IS OVER? 1. [8] Psychologist 2. [5] Manager of a small store in a city 3. [9] Head of a department in state government 4. [3] Clerk in a store 5. [10] Cabinet member in the federal government 6. [1] Janitor 7. [4] Musician in a symphony orchestra 8. [6] Radio announcer 9. [2] Coal miner

CODE	QUESTIONS
	39. Of the jobs listed in this question, which is the BEST ONE you are sure she can get by the time she is 30 YEARS OLD? 1. [8] Civil engineer 2. [5] Bookkeeper 3. [9] Minister or priest 4. [3] Streetcar motorman or city bus driver 5. [10] Diplomat in the United States Foreign Service 6. [1] Share cropper (one who owns no livestock or farm machinery, and does not manage the farm) 7. [7] Author of novels 8. [4] Plumber 9. [6] Newspaper columnist 10. [2] Taxi driver
	40. Of the jobs listed in this question, which ONE would you like to see her have when she is 30 YEARS OLD, if she were FREE TO CHOOSE ANY of them she wished? 1. [8] Airline pilot 2. [5] Insurance agent 3. [9] Architect 4. [3] Milk route man 5. [10] Mayor of a large city 6. [1] Garbage collector 7. [7] Captain in the Army 8. [4] Garage mechanic 9. [6] Owner-operator of a printing shop 10. [2] Railroad section hand
	41. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE SHE CAN HAVE BY the time she is 30 YEARS OLD? 1. [8] Artist 2. [5] Traveling salesman for a wholesale concern 3. [9] Chemist 4. [3] Truck Driver 5. [10] College professor 6. [1] Street sweeper 7. [7] Building contractor 8. [4] Local official of a labor union 9. [6] Electrician 10. [2] Restaurant waiter

CODE	QUESTIONS
	42. Of the jobs listed in this question, which ONE would you like to see her have when she is 30 YEARS OLD, if she were FREE TO HAVE ANY of them she wished? 1. [8] Owner of a factory that employs about 100 people 2. [5] Playground director 3. [9] Dentist 4. [3] Lumberjack 5. [10] Scientist 6. [1] Shoeshiner 7. [7] Public school teacher 8. [4] Owner-operator of a lunch stand 9. [6] Trained machinist 10. [2] Dock worker

PID - No. 2

For Mother or Female Guardian

Section I

GENERAL INSTRUCTIONS

The National Center for Research in Vocational Education at The Ohio State University is trying to find out what students think about occupations and education. In order to have a successful study we need the aid and cooperation of the parents or guardians of the students who are participating in this study. Your daughter has been randomly selected to participate in this study. We would greatly appreciate it if you would take the time to complete this questionnaire.

None of the questions you are being asked to answer have "right" or "wrong" answers. We want to know your own personal opinions. It is important that you answer all questions as best you can, EVEN IF YOU HAVE TO GUESS.

No one will see your specific answers. Special safeguards have been established to make sure that your replies will be kept strictly confidential. However, if you feel that any question is improper, please feel free to skip that specific item.*

PLEASE NOTE: If you have any problems or questions concerning the questionnaire, call the following numbers between 6 p.m. and 10:30 p.m. and a researcher will assist you.

A. ______________________________

B. ______________________________

C. ______________________________

Thank you.

____

*After reading the above instructions please sign your name.

PID - 2

INSTRUCTIONS: We would like some information about you. Remember, answers that you will provide will be confidential and not seen by anyone except the research staff. Please answer each of the following questions to the best of your ability. Do not mark in the "code" column.

CODE	QUESTIONS
	1. Date of birth ______________________ Age ______________ (Month) (Day) (Year)
	2. Sex: [1] (a) Male [2] (b) Female
	3. Race: [1] (a) White [2] (b) Black [3] (c) Oriental [4] (d) Spanish [5] (e) Other
	4. How old were you when you first married? ______________________
	The next few questions concern your present job.
	5. At this time you are: [1] (a) employed [2] (b) unemployed [3] (c) retired [4] (d) housewife
	6. What is your occupation? (Specify the kind of work you do—if you are unemployed or retired indicate the last job you held.) [Coded into Duncan SEI scores, housewife = missing data]
	7. Is this job Full Time or Part Time? (If unemployed or retired, answer questions 8, 9, 10, 11, 12 as though you were employed at the last job you held.) [2] (a) Full Time [1] (b) Part Time
	Question 7 was not included in the questionnaire for parents of males.

CODE	QUESTIONS
	8. Who do you work for? [1] (a) self-employed [2] (b) private employer [3] (c) military [4] (d) federal government [5] (e) state government [6] (f) local government
	9. How long have you worked at your present job? [1] (a) less than one year [2] (b) 1-2 years [3] (c) 3-5 years [4] (d) 6-10 years [5] (e) 11-20 years [6] (f) more than 20 years
	10. How much money do you make each month from your present job (if you have more than one job, show your income from all your jobs)? ____________________ dollars per month
	11. How long have you had the same occupation? [1] (a) less than one year [2] (b) 1-2 years [3] (c) 3-5 years [4] (d) 6-10 years [5] (e) 11-20 years [6] (f) more than 20 years
	12. Do you hold more than one job at this time? [1] (a) Yes [0] (b) No
	13. If you hold more than one job, please specify what you do at each of them (a) ______________________________ (b) ______________________________ (c) ______________________________

CODE	QUESTIONS
	The next few questions concern the job you held just before your present job.
	14. What type of work did you do at that job? ____
	15. Was this job Full Time or Part Time? [2] (a) Full Time [1] (b) Part Time
	16. Who did you work for? [1] (a) self-employed [2] (b) private employer [3] (c) military [4] (d) federal government [5] (e) state government [6] (f) local government
	17. How long did you work at that job? [1] (a) less than one year [2] (b) 1-2 years [3] (c) 3-5 years [4] (d) 6-10 years [5] (e) 11-20 years [6] (f) more than 20 years
	18. How much money did you make each month at that job? (If you had more than one job show your income from all your jobs.) ____________________ dollars per month
	19. Did you hold more than one job at that time? [1] (a) Yes [0] (b) No
	20. When you changed from your PREVIOUS MAIN job to your PRESENT MAIN job, were you unemployed for a period of time? [1] (a) Yes [0] (b) No

CODE	QUESTIONS
	21. If yes, how long were you unemployed? ______________________________
	22. How much schooling did you complete? [1] none [2] 1st grade [3] 2nd grade [4] 3rd grade [5] 4th grade [6] 5th grade [7] 6th grade [8] 7th grade [9] 8th grade [10] 9th grade [11] 10th grade [12] 11th grade [13] graduated from high school [14] some vocational-technical school [15] graduated from vocational-technical school [16] some college [17] graduated from college (B.A., or B.S. degree) [18] some graduate school [19] master's degree (M.A., or M.S. degree) [20] some graduate school after master's degree but no doctorate [21] doctorate or equivalent degree (Ph.D., M.D., D.D., etc.) [Codes correspond to the numbers beside each response alternative]
	The following questions concern your interest in marriage and/or career for (name of daughter). ______________ Please answer all questions, EVEN IF YOU MUST GUESS.
	23. At what age would you like to have her marry? ______________ (If you would like to see her remain single, place "0" in the blank.)
	24. Assuming that she does marry, would you like for her to have children? [1] Yes [0] No

CODE	QUESTIONS
	25. How many children would you like for her to have? ____________
	This set of questions concerns your interest in the future of (name of daughter). Please answer both questions, EVEN IF YOU MUST GUESS. 26. Which of the following plans for combining a career with marriage would you like to see her follow for her life? ____ 1. Devote all her time to marraige and a family without a career ____ 2. Work for a while after marriage, but eventually devote full time to her home and children ____ 3. Devote full time to her children during their early years and then return to work when they get older ____ 4. Work most of the time after marriage taking only short periods off to have children or not having children ____ 5. Devote all her time to her career without marriage and a family [Codes correspond to the number beside each response alternative]
	27. Which of the following plans for combining a career with marriage do you think she really will follow? ____ 1. Devote all her time to marriage and a family without a career ____ 2. Work for a while after marriage but eventually devote full time to her home and children ____ 3. Devote full time to her children during their early years and then return to work when they get older ____ 4. Work most of the time after marriage taking only short periods off to have children ____ 5. Devote all her time to her career without marriage and a family [Codes correspond to the number beside each response alternative]

For the following statements, decide on the degree to which you agree or disagree with each statement and then place an "X" in the appropriate column. This should be how you personally feel about the statement, not how you think other people feel.

CODE	STATEMENTS	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
	28. Women who have jobs are not really happy.	[1]	[2]	[3]	[4]	[5]
	29. Woman's place is in the home.	[1]	[2]	[3]	[4]	[5]
	30. Women are trying to imitate men.	[1]	[2]	[3]	[4]	[5]
	31. Married women should hold jobs so they can have a life of their own	[5]	[4]	[3]	[2]	[1]
	32. Parents should encourage the idea of marriage and homemaking (rather than working) to their daughters from childhood.	[1]	[2]	[3]	[4]	[5]

INSTRUCTIONS: The following questions are about (name of daughter). Please answer them to the best of your ability, EVEN IF YOU MUST GUESS.

33. How much education would you like to see her have if NOTHING prevented her from having AS MUCH AS SHE WANTED?

1. [11] 10th grade
2. [12] 11th grade
3. [13] graduate from high school
4. [14] some vocational-technical school
5. [15] graduate from vocational-technical school
6. [16] some college
7. [17] graduate from college
8. [18] some graduate school
9. [19] master's degree (M.A., M.S.)
10. [20] some graduate school after the master's degree
11. [21] doctorate or equivalent degree (Ph.D., M.D., D.D.)

CODE	QUESTIONS
	34. How much education do you think she REALLY WILL GET? (Check one answer) 1. [11] 10th grade 2. [12] 11th grade 3. [13] graduate from high school 4. [14] some vocational-technical school 5. [15] graduate from vocational-technical school 6. [16] some college 7. [17] graduate from college 8. [18] some graduate school 9. [19] master's degree (M.A., M.S.) 10. [20] some graduate school after the master's degree 11. [21] doctorate or equivalent degree (Ph.D., M.D., D.D.)
	INSTRUCTIONS: This set of questions concerns your interest in different kinds of jobs for ____(name of daughter)____. There are eight questions, you are to check ONE job in EACH question. Make sure it is the BEST ANSWER you can give to this question. Read each question carefully. They are all different. Do not omit any, EVEN IF YOU MUST GUESS.
	35. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE SHE CAN GET when her SCHOOLING IS OVER? 1. [8] Lawyer 2. [5] Welfare worker for a city government 3. [9] United States representative in Congress 4. [3] Corporal in the Army 5. [10] United States Supreme Court Justice 6. [1] Night watchman 7. [7] Sociologist 8. [4] Policeman 9. [6] County agricultural agent 10. [2] Filling station attendant

CODE	QUESTIONS
	36. Of the jobs listed in this question which ONE would you most like to see her have if she were FREE TO CHOOSE ANY of them she wished when her SCHOOLING IS OVER? 1. [8] Member of the board of directors of a large corporation 2. [5] Undertaker 3. [9] Banker 4. [3] Machine operator in a factory 5. [10] Physician (doctor) 6. [1] Clothes presser in a laundry 7. [7] Accountant for a large business 8. [4] Railroad conductor 9. [6] Railroad engineer 10. [2] Singer in a nightclub
	37. Of the jobs listed in this question which is the BEST ONE you are REALLY SURE SHE CAN GET when her SCHOOLING IS OVER? 1. [8] Nuclear physicist 2. [5] Reporter for a daily newspaper 3. [9] County judge 4. [3] Barber 5. [10] State governor 6. [1] Soda fountain clerk 7. [7] Biologist 8. [4] Mail carrier 9. [6] Official of an international labor union 10. [2] Farm hand
	38. Of the jobs listed in this question, which ONE would you most like to see her have if she were FREE TO CHOOSE ANY of them she wished when her SCHOOLING IS OVER? 1. [8] Psychologist 2. [5] Manager of a small store in a city 3. [9] Head of a department in state government 4. [3] Clerk in a store 5. [10] Cabinet member in the federal government 6. [1] Janitor 7. [4] Musician in a symphony orchestra 8. [6] Radio announcer 9. [2] Coal miner

CODE	QUESTIONS
	39. Of the jobs listed in this question, which is the BEST ONE you are sure she can get by the time she is 30 YEARS OLD. 1. [8] Civil engineer 2. [5] Bookkeeper 3. [9] Minister or priest 4. [3] Streetcar motorman or city bus driver 5. [10] Diplomat in the United States Foreign Service 6. [1] Share cropper (one who owns no livestock or farm machinery, and does not manage the farm) 7. [7] Author of novels 8. [4] Plumber 9. [6] Newspaper columnist 10. [2] Taxi driver
	40. Of the jobs listed in this question, which ONE would you like to see her have when she is 30 YEARS OLD, if she were FREE TO CHOOSE ANY of them she wished? 1. [8] Airline pilot 2. [5] Insurance agent 3. [9] Architect 4. [3] Milk route man 5. [10] Mayor of a large city 6. [1] Garbage collector 7. [7] Captain in the Army 8. [4] Garage mechanic 9. [6] Owner-operator of a printing shop 10. [2] Railroad section hand
	41. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE SHE CAN HAVE BY the time she is 30 YEARS OLD? 1. [8] Artist 2. [5] Traveling salesman for a wholesale concern 3. [9] Chemist 4. [3] Truck driver 5. [10] College professor 6. [1] Street sweeper 7. [7] Building contractor 8. [4] Local official of a labor union 9. [6] Electrician 10. [2] Restaurant waiter

CODE	QUESTIONS
	42. Of the jobs listed in this question, which ONE would you like to see her have when she is 30 YEARS OLD, if she were FREE TO HAVE ANY of them she wished? 1. [8] Owner of a factory that employers about 100 people 2. [5] Playground director 3. [9] Dentist 4. [3] Lumberjack 5. [10] Scientist 6. [1] Shoeshiner 7. [7] Public school teacher 8. [4] Owner-operator of a lunch stand 9. [6] Trained machinist 10. [2] Dock worker

the END